SAMSUNG

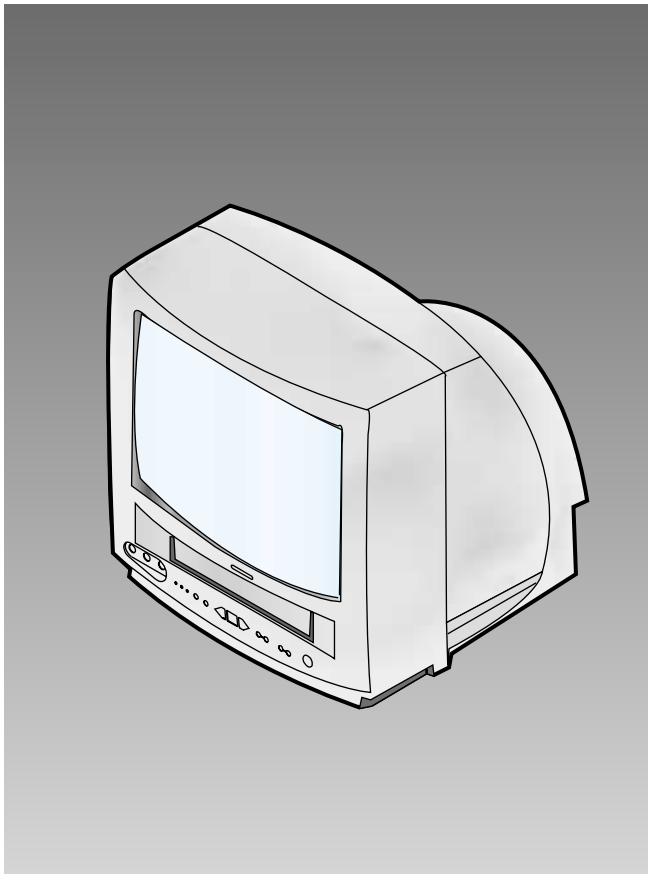
Television Video Cassette Recorder

Chassis : V15A(REV.1)

Model : CMC13003X/KMT

SERVICE Manual

Television Video Cassette Recorder



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2. Specifications

Format	VHS Standard
Recording System	Rotary, azimuth two-head or four-head helical scanning system Luminance : FM azimuth recording Color signal : converted subcarrier phase shift recording
Television System	NTSC-type color signal EIA standard (525 lines, 60 fields)
Audio Track	1 track
Tape Width	12.7 mm (1/2 inch)
Record Speed SP SLP	 33.35 mm/s (1.31 in./s) 11.12 mm/s (0.43 in./s)
Record/Playback Time	480 min. with T-160 used in SLP mode
FF/Rew Time	Less than 100 sec. with T-120
Heads	Video : 2 rotary heads, 4 rotary head Audio/Control : 1 stationary head Erase : 1 full track erase 1 audio track erase
VIDEO	
Input	VIDEO IN jack (RCA) 1.0Vp-p, 75 ohm unbalanced
Signal-to-Noise Ratio	Better than 35dB
Horizontal Resolution	Color/Monochrome: more than 220 lines
AUDIO	
Input	AUDIO IN jack (RCA) -8dBm,50kohm unbalanced
Horizontal Resolution	Color/Monochrome : more than 220 lines
Frequency Response	
SP : - 6dB SLP : - 6dB	100Hz - 10KHz 100Hz - 5KHz
TV Tuner	VHF input : Ch.2 - Ch.13, Cable channels 4A, A~W, W+1~W+84, A-5~A-1 75 ohm unbalanced UHF input : Ch.14-Ch.69 VHF,UHF one input 75 ohm unbalanced
Power Requirement	120V AC, 60Hz (USA/CANADA), 100V ~ 240V (LATIN)
Power Consumption	13 (14) Inch : Approx. 65 watts when on 19 (20) Inch : Approx. 80 watts when on
Operating Temperature	41°F - 104°F (5°C - 40°C)
Operating Humidity	10%-75%

Equipment specifications are subject to change without notice.

MEMO

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MEMO

3. Alignments and Adjustments (VCR)

3-1 Mechanical Adjustments

3-1-1 Tape Transport Adjustment

Note : The tape transport system was adjusted precisely in the factory, any adjustments is unnecessary except for:

- ✥ Noise on the screen.
- ✥ Tape damage.
- ✥ Parts replacement in the tape transport system.

3-1-1(A) PARTS LOCATIONS

The lower flange height of tape guide is used as the reference height for the transport adjustment. To maintain the height of the tape guide, do not apply excessive force onto the main base.

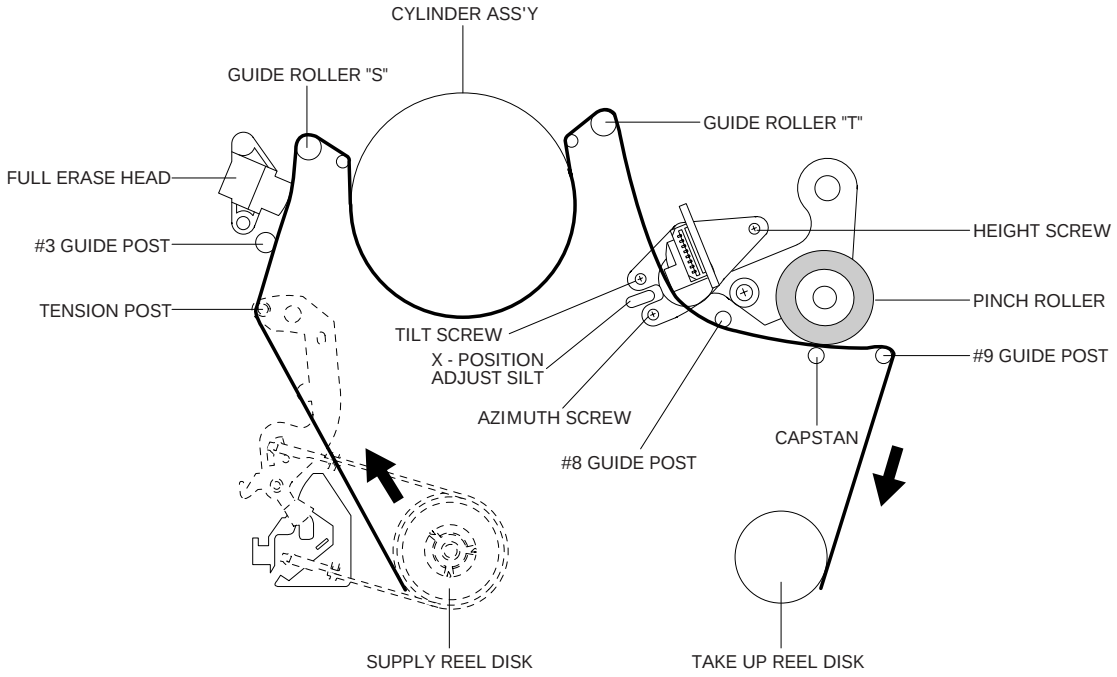


Fig. 3-1 Parts Locations of transport system

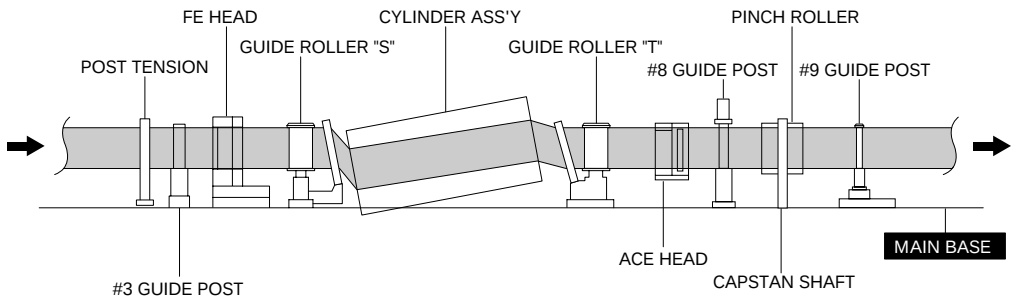


Fig. 3-2 Vertical section of tape transport system

3-2 Adjustments

3-2-1 Preadjustment

1. When parts are replaced, the tape ran sport system may be changed. When many different parts are replaced, refer to the procedures for the tape transport system.

   To begin run a T-120 tape and make sure that excessive tape wrinkle does not occur at each of the tape guides.

2. If tape wrinkle occurs at the S, T-guide rollers, turn the S, T-guide rollers until the tape wrinkle disappears.

3. If tape wrinkle still occurs at the tape guide, adjust the tilt of A/C head.

4. A/C head adjustment locations

Test Points : JM112-CTL (control waveform)
JM113-H'D SW (head switching sync)
JM114-EnV (envelope waveform)
JM119-A.OUT (audio output)
Test Tape : Color bar (1 KHz)
Lion pattern(7 KHz)

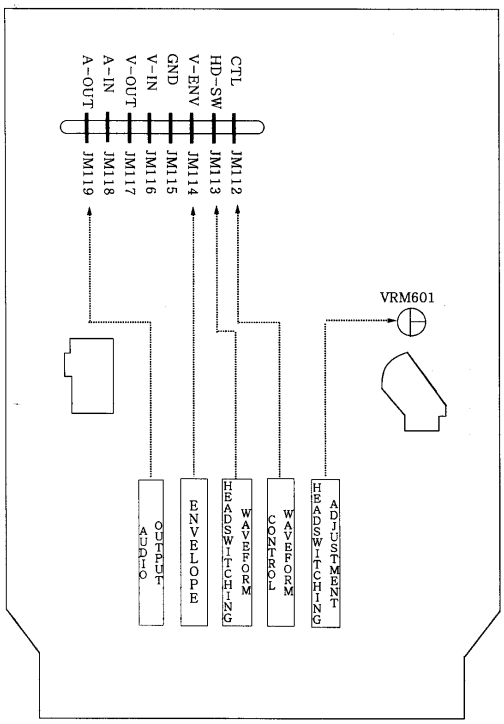


Fig. 3-3

3-2-2 Adjustments

3-2-2(A) A/C HEAD HEIGHT ADJUSTMENT

1. Run the alignment tape (Color bar) in the playback mode.

2. Observe surface of the audio head using a dental mirror.

3. Turn screw (C) clockwise or counterclockwise until the gap of lower tape edge and the lower edge of the control head is about 0.25mm (Refer to Fig. 3-4 and 3-5).

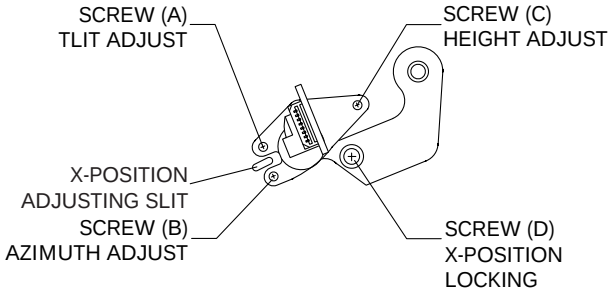


Fig. 3-4 Location of A/C Head Adjustment Screw

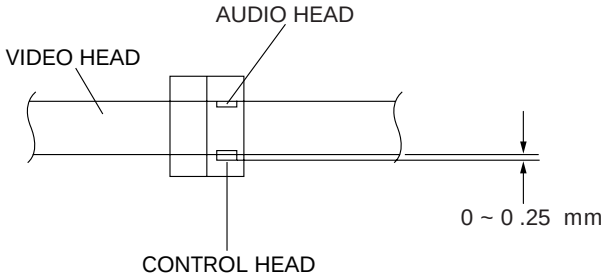


Fig. 3-5 A/C Head Height Adjustment

3-2-2 (B) A/C HEAD TILT ADJUSTMENT

1. Playback a blank tape and observe the position of the tape at the lower flange of tape guide.
2. Confirm that there is no curl or wrinkle at the lower flange of tape guide as shown in (Fig. 3-6).
3. If a curl or wrinkle of the tape occurs, slightly turn the screw (A) tilt adjust on the ACE head ass'y.
4. Reconfirm the ACE head height.

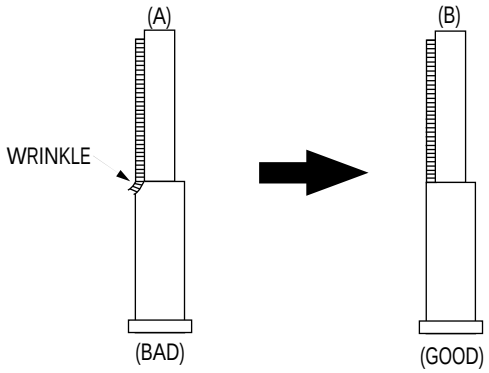


Fig. 3-6 Tape Guide Check

3-2-2(C) AUDIO AZIMUTH ADJUSTMENT

1. Load alignment tape (Mono Scope) and play back a 7KHz signal.
2. Connect Ch1 scope probe to JM119(A-OUT).
3. Adjust A/C head azimuth adjustment screw B for maximum audio output level (see Fig. 3-4).

3-2-2(D) A/C HEAD POSITION (X-POINT) ADJUSTMENT

1. Load alignment tape (Mono Scope) and play back a 7KHz signal (SP Mode).
2. Connect Ch1 scope probe to JM119 (A-out), Ch2 scope probe to JM113-H'D SW Adjust sync to Channel 1.
3. 4HD Model : Set the control pulse to 6.5 msec using the Fine tracking buttons +/- on the remote control (see Fig. 3-8, 3-9).

   2HD Model : 2.5msec (see Fig. 3-8, 3-9).
4. Connect Ch1 scope probe to JM114-ENV.
5. Insert the adjusting driver into the X-position adjusting gear and adjust the driver for maximum envelope waveform.

   Note :
   Do not adjust the X-point using excessive force. After turning the X-point adjusting screw (D) counterclockwise a little, perform the adjustment and then tighten the screw (See Fig. 3-4).

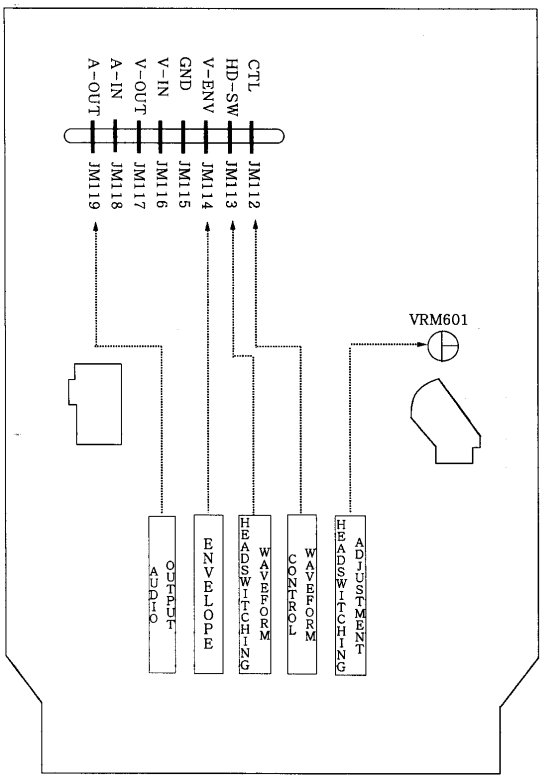


Fig. 3-7 Test Point Position (Main PCB : Parts)

SCOPE SETTINGS

♦ Setting of Scope ♦
- Volt/div. ; CH-1 = 0.1V
  CH-2 = 0.2V

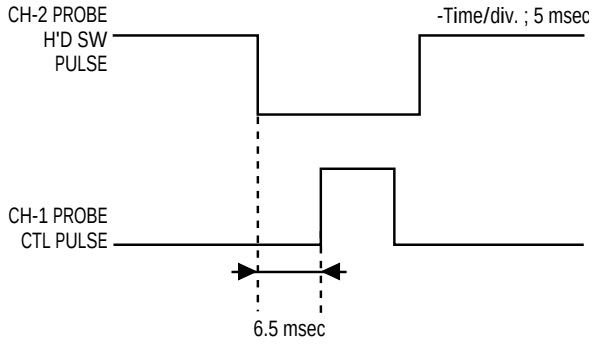


Fig. 3-8 (A) Tracking Preset Adjustment (4HD)

♦ Setting of Scope ♦
- Volt/div. ; CH-1 = 0.1V
  CH-2 = 0.2V

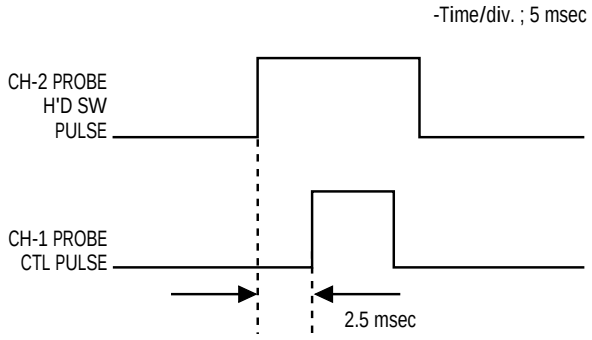


Fig. 3-8 (B) Tracking Preset Adjustment (2HD)

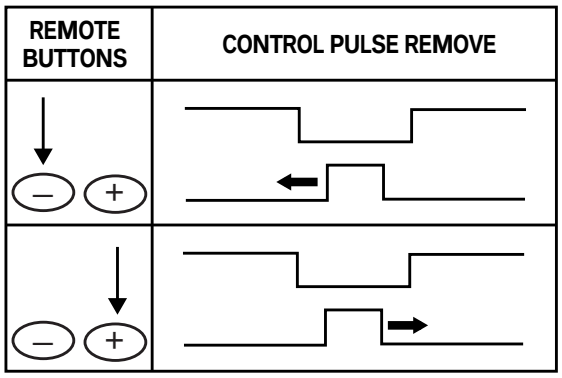


Fig. 3-9 Control Pulse Adjustment

3-2-2(E) LINEARITY ADJUSTMENT
(GUIDE ROLLER S,T ADJUSTMENT)

Test Points : JM113-H'D SW (head switching sync)
JM114-EnV (envelope waveform)

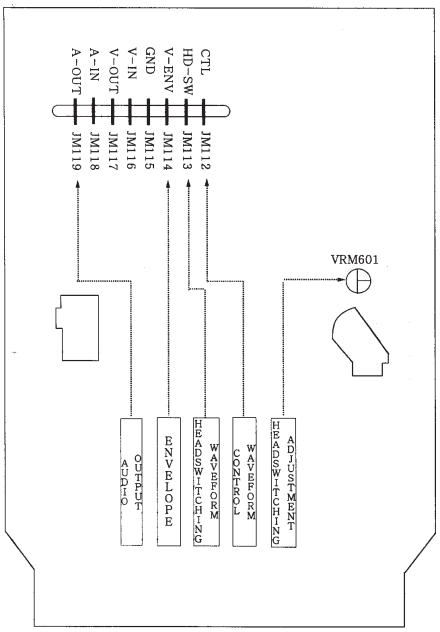


Fig. 3-10 Test Point Position (Main PCB : Parts)

1. Play back the Mono Scope alignment tape (SP Mode).

2. Observe the video envelope signal on the oscilloscope after taking sync with the video switching pulse.

3. Make sure that the video envelope meets the specifications of Fig. 3-11 (especially for minimum values).

Note :
a = Maximum output of the video RF envelope
b = Minimum output of the video RF envelope at the entrance side
c = Minimum output of the video RF envelope at the center point
d = Maximum output of the video RF envelope at the exit side

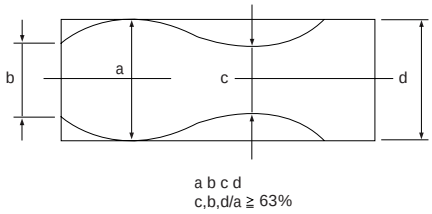


Fig. 3-11 Envelope Waveform Adjustment

4. If Fig. 3-12 A does not meet the specification, adjust the S-guide roller up or down.

5. If Fig. 3-12 B does no meet the specification, adjust the T-guide roller up or down.

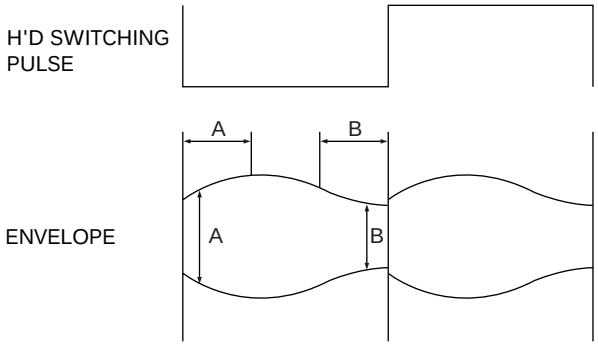


Fig. 3-12 Adjustment Points

6. Slightly loosen the set screw at the lower part of S, T-guide rollers using a hex wrench (diameter : 0.9mm), so that the guide rollers can be adjusted with reasonable tightness (Fig. 3-13).

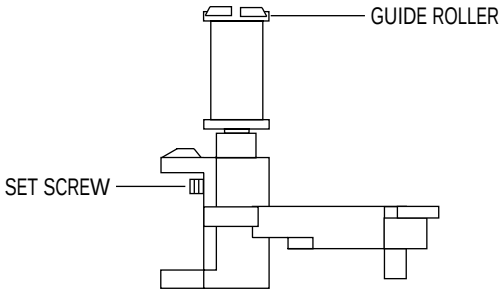


Fig. 3-13

7. Play back the Mono Scope alignment tape (SP Mode).

8. Connect CH1 to JM114 (ENV), and CH2 to JM113 (H'D) for taking sync (located on the same PCB).

9. Turn the guide roller head with a flat head screw driver (▬) to obtain a flat video RF envelope as shown in Fig. 3-14.

10. After completing the adjustments, tighten the set screw.

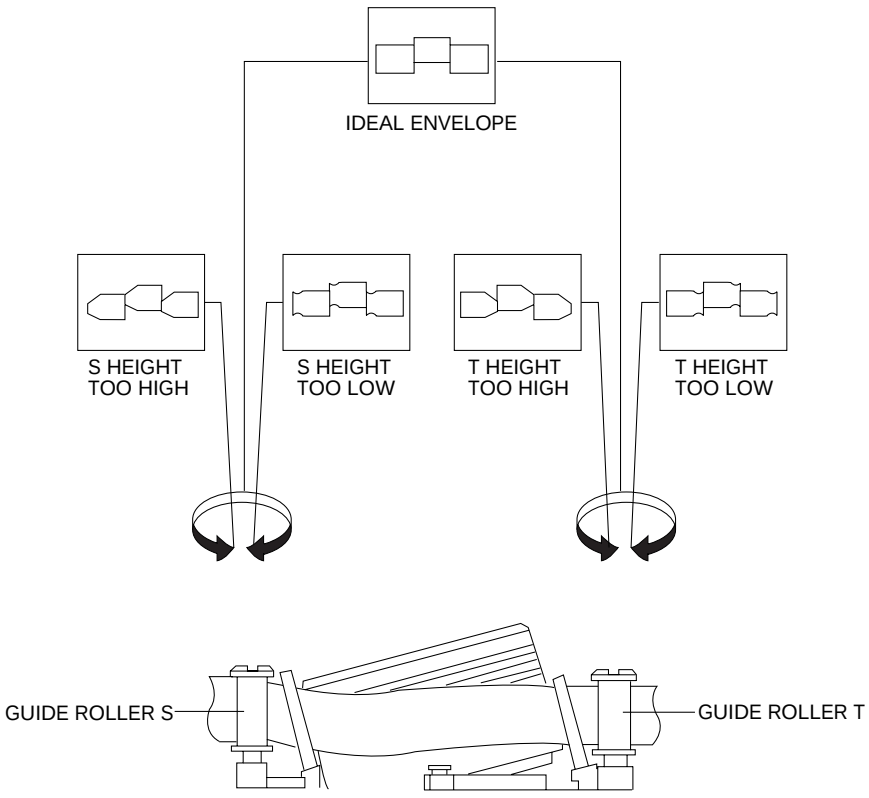


Fig. 3-14 S, T-Guide Roller Height Adjustment

3-2-3 Check Switch over from RPS to Playback Mode

1. Check the transition from RPS to playback mode using a pre-recorded SP tape.
   Make sure that the leading edge of envelope comes to an appropriate steady state within 3 seconds as shown in Fig. 3-15.

2. If the leading edge of envelope waveform does not meet the specification within 3 seconds, make sure that there is no gap between the S-roller lower flange and the tape. If there is a gap, readjust the S-guide roller.

3 Change operation from RPS to Play back Mode, and make sure that the leading edge

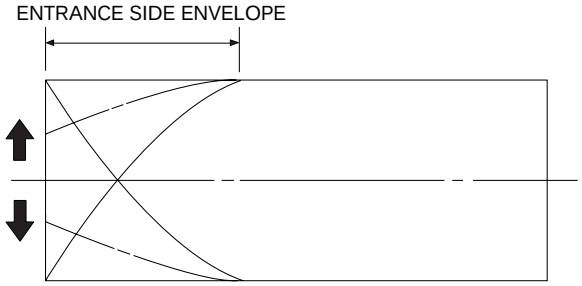


Fig. 3-15 Video envelope rise (when transiting from RPS to Playback mode)

3-2-4 Envelope Check

1. Make recordings on T-120 and T-160 tapes, and make sure that the playback output envelope meets the specification show in Fig. 3-16.

2. Play back a self recorded tape (use a T-120). The video envelope should meet the specification shown in Fig. 3-16.
   In SLP Mode, (A) should be the same as (B). If the head gap is wide, check the cylinder

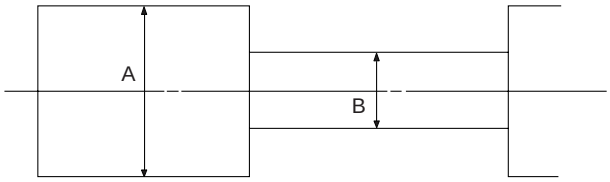


Fig. 3-16 Envelope Output and Output Level Difference Playback mode)

3-2-5 Tape Wrinkle Check

1. Run the T-180 tape in playback, FPS, RPS and the Pause Modes, and observe the tape wrinkle at each guide.

2. If excessive tape wrinkle is observed during the above modes, do the following adjustments :

   If tape wrinkle occurs at S, T-guide rollers, do a linearity adjustment. If tape wrinkle exists at the tape guide flange, do an A/C head assembly adjustment.

3-3 Reel Torque Adjustments

1. The rotation of the capstan motor causes the Holder Clutch Ass'y to rotate through the Belt Pulley.

2. The spring wrap PLAY/REV of holder clutch ass'y drives the disk reel S, T through gear idle by rotation of gear center ass'y.

3. Brake is operated by slider cam at FF/REW mode.

4. Transportation of accurate driving force is done by gears (Gear Center Ass'y).

Note : If the spec. does not meet the followings specifications, replace the holder clutch ass'y and then recheck.

MODE	TORQUE g/cm		GAUGE
PB	NTSC	82.5 ± 27.5	Cassette Torquemeter
	PAL	79 ± 27	
RPS	145 ± 30		Cassette Torquemeter

3-4 Location Adjustment and Confirmation of Tension Post

1. Remove the holder cassette ass'y and then push the lever FL Arm-R to the direction of loading.

2. Push the lever tension drive ❶ in the direction of arrow. (See Fig. 3-17)

3. Turn the gear worm wheel ❷ clockwise so that "Timing Point" of the slider FL drive ❸ and gear FL cam ❹ can be aligned (See Fig. 3-18).

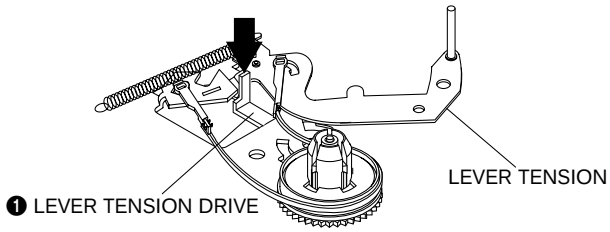


Fig. 3-17

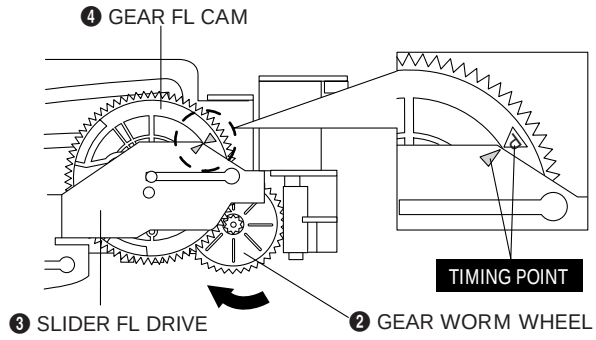


Fig. 3-18

4. As rotating Disk S Reel ❶ clockwise and the region of adjusting in the Main Base (in shape of slit) clockwise or counterclockwise after inserting screw driver in the slit on Main Base. Adjust the left end edge of Lever Tension Ass'y ❸ to 1.3+1.5/-0.5mm from the location of mark in the Main Base.

5. As rotating Disk S Reel ❶, double-check the location of the left end edge of Lever Tension Ass'y and the quantity of crossing from mark on Main Base. (+1.0/-0.5mm)

   Counterclockwise : Torque UP
   Clockwise : Torque DOWN

   Back Tension should be 56 ± 15g.cm at inspecting it with Back Tension Meter.

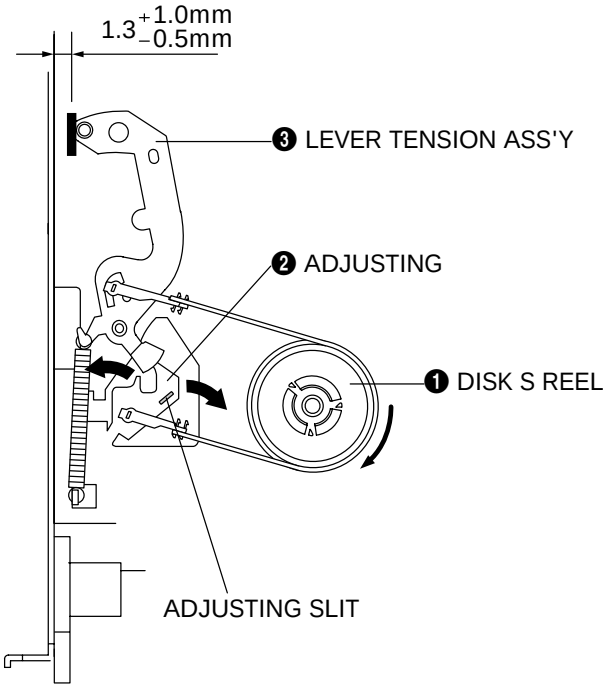


Fig. 3-19 Tension Pole and Back Tension Adjustment

Note :

1. Mark on Main Base is located in about 1.3mm from inside of bending line.

2. Be careful not to deform the region of adjusting on Main Base up and down at adjusting.

3-5 Circuit (SERVO) Adjustment

3-5-1 Adjust the switching point.

1. Play back the SP standard tape.
2. Connect the oscilloscope CH1 to EYM03 (H'D) and CH2 to EYM11 (V.OUT)
3. Set the oscilloscope sync to CH1, and adjust VRM601 for 6.5H ± 0.5H waveform as shown in the figure.

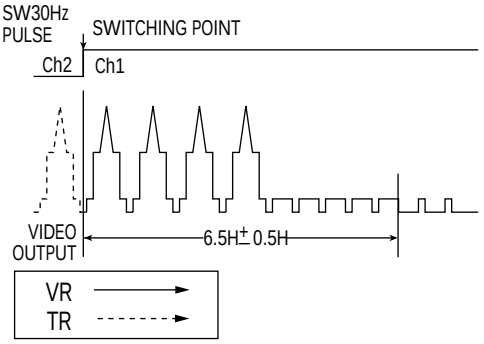


Fig. 3-20

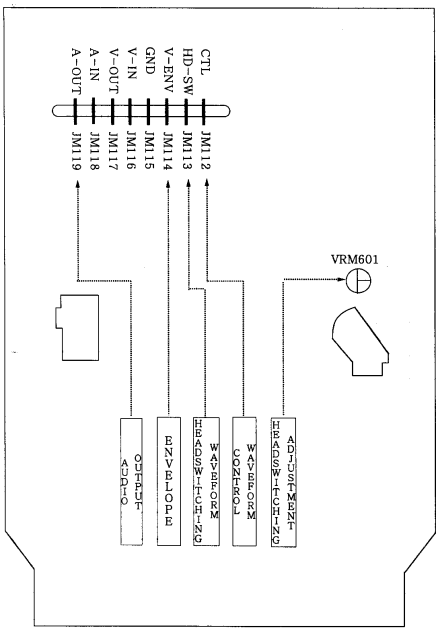


Fig. 3-21

MEMO

4. Alignment and Adjustments (TV)

4-1 Factory Alignment

4-1-1 Factory Mode Menus

Since there are no VRs in the V15A chassis, all adjustments must be performed in the "Factory mode." Factory Mode adjustments are necessary if either the EEPROM (IC902) or the CRT is replaced. Do not attempt to make adjustments in either the Play Mode or Line-in Mode.

4-1-2 Entering the Factory Mode

Press the following transmitter keys in STANDBY mode:

MUTE $\rightarrow$ 1 $\rightarrow$ 8 $\rightarrow$ 2 $\rightarrow$ POWER
"Factory Mode Menu" is displayed

10	SVC, MUTE

PICTURE CONTROL

AGC	45	BC	0
VCO	40	GG	128
SCT	30	BG	128
SCR	20	SB	15
STT	36	VA	36
RC	0	VS	0
GC	0	HS	16

Example for "VCO" : Use the CH down key to select VCO, and use the Volume + (or VOL - key) to change the data.

VCO 45

4-1-3 Factory Mode Adjustment Settings

No	Item	Function	Range	Initialization MICOM Data
1	AGC	RF AGC Adjustment	0 ~ 63	45
2	VCO	PIF VCO Adjustment	0 ~ 127	40
3	SCT	SUB-CONTRAST Adjustment	0 ~ 63	30
4	SCR	SUB-COLOR Adjustment	0 ~ 63	20
5	STT	SUB-TINT Adjustment	0 ~ 63	36
6	RC	RED-CUT OFF Adjustment	0 ~ 255	0
7	GC	GREEN-CUT OFF Adjustment	0 ~ 255	0
8	BC	BLUE-CUT OFF Adjustment	0 ~ 255	0
9	GG	GREEN-GAIN Adjustment	0 ~ 255	128
10	BG	BLUE-GAIN Adjustment	0 ~ 255	128
11	SB	SUB-BRIGHTNESS Adjustment	0 ~ 63	15
12	VA	VERTICAL SIZE Adjustment	0 ~ 63	36
13	VS	VERTICAL CENTER Adjustment	0 ~ 4	0
14	HS	HORIZONTAL Phase Adjustment	0 ~ 31	16
15	AFN		ON or OFF	OFF
16	ACS/VCHIP		ON or OFF	OFF
17	TRAP	3.58MHz Switch	ON or OFF	ON
18	OPTION	AFT Adjustment	ANALOG/DIGITAL	ANALOG
19	EEPROM	User Mode Initialization	INITIALIZE	INITIALIZE

Notes:

1. Press MUTE to enter Horizontal Line mode. In this mode, the screen voltage is checked before adjusting the RGB cut-off.

2. Use Trap On mode to bypass the comb-filter.

3. In the Option mode, adjustments are usually “Analog” (“Digital” is used to widen the AFT pull-in range).

4. When the VOLUME + key is pressed in the EEPROM mode, all of the “user-adjusted” data is reset to the factory-preset values.

5. The ACS/V-CHIP mode is available only in USA and CANADA.
So set ACS/V-CHIP ON only for those two countries.

4-1-4 IC902 Replacement

1. When IC902 is replaced, all values are reset to "Initialized MICOM Data," so readjustment is necessary.
2. Press the POWER button 10 seconds after plug-in.
3. To enter the factory mode, refer to 4-1-2 (Factory Mode Adjustment).

4-1-5 PIF VCO Adjustment

1. Without connecting an antenna to the tuner, feed a 45.75MHz signal to C104. Use a pattern generator (Marked : IF).
2. Adjust the VCO in the service mode; set IC200 Pin 44 (AFT) to 2.5V.

4-1-6 Sub-Contrast Adjustment

1. Set sub-contrast to step 36 (13 inch) or step 40 (19 inch).

4-1-7 Sub-Contrast Adjustment

1. Set sub-tint to step 27.

4-1-8 Sub-Color Adjustment

1. Set sub-tint to step 5.

4-1-9 White Balance Adjustment

4-1-9 (A) LOW-LIGHT ADJUSTMENTS

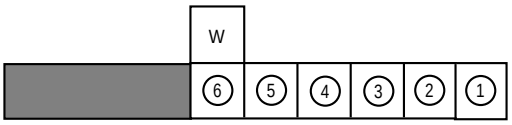
1. Input either a lion head or "pure white" color pattern.
2. Warm up the receiver for 30 minutes.
3. Check data in the Factory mode:
   RC, GC, BC should be "0".
   Steps BG and GG should be 128.
4. Enter Horizontal Line mode by pressing the MUTE key.
5. Adjust the screen VR on T444 (FBT) until a dim colored line (red,green or blue) appears on the screen.
6. Adjust RC, BC, GC so that the dim colored line becomes white.
7. Exit the horizontal line via the MUTE key.

4-1-9 (B) HIGH-LIGHT ADJUSTMENTS

1. After adjusting the low-light, input a high-light pattern.
2. Adjust GG, BG in the Factory Mode.
3. Recheck in low-light.

4-1-10 Sub-Brightness Adjustment

1. Input a Toshiba pattern.
2. Warm up the receiver for 10 minutes.
3. Enter the Factory mode. Set SB to the point where the 6th point is brighter in the gray scale.



4. If there is no Toshiba pattern available, use a 10 step pattern and adjust as follows:

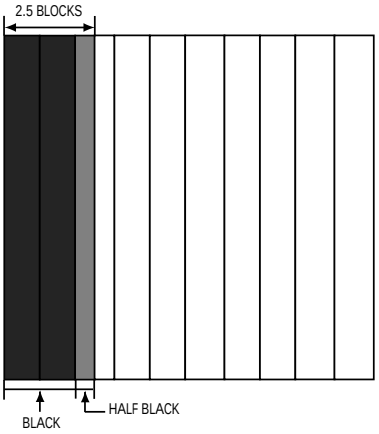


Fig. 4-4

4-1-11 Vertical Center Adjustment

1. Input a lion head pattern.
2. Enter the Factory mode.
3. Set VS so that the vertical center point in the lion head pattern coincides with the CRT center.

4-1-12 Vertical Size Adjustment

1. Input a lion head pattern.
2. After the vertical center adjustment, enter the Factory mode.
3. Adjust VA so that both the top and bottom of the screen are 3.5. If the top and bottom values are not equal, adjust so that the sum of the two values is 7.0.

4-1-13 Horizontal Size Adjustment

1. Input a lion head pattern.
2. Enter the Factory mode.
3. Adjust HS so that both left and right of the pattern are 5.0±0.5.

4-1-14 When CRT Is Replaced

Do the following AFTER the basic purity and convergence adjustments:

1. White Balance Adjustment
2. Sub-brightness Adjustment
3. Vertical Center Adjustment (VS)
4. Vertical Size Adjustment (VA)
5. Horizontal Size Adjustment (HS)

Notes :

1. After completing all adjustments, press DISPLAY, 6, 1, 4 and POWER ON while in the Stand By Mode.
2. Commercial use on/off displays: While the receiver is off, re-press POWER ON to restore the adjusted data.

   Example 1: If the main power is off while the receiver is “on” and the receiver is powered off for a long time, the latest adjusted data will remain intact when the power is reapplied.

   Example 2: If condition “1”—described above—occurs while a tape is playing in the “True Repeat On” mode, the set will revert to True Repeat when power is reapplied.

   Important: Check if the Commercial Use mode is on. If so, switch it off. Also, it is impossible to enter the Commercial Mode when a tape is loaded (i.e., unload the tape and press DISPLAY, 6, 1, 4, POWER ON).

4-2 Electrical Adjustment

4-2-1 General Alignment Instructions

1. Usually, a color TV-VCR needs only a slight touch-up adjustment upon installation. Check the basic characteristics such as picture height, focus and horizontal and vertical sync.

2. Observe the picture for good black and white details; there should be no objectionable color shading. If color shading is present, demagnetize the receiver. If color shading persists, perform purity and convergence adjustments described below.

3. Use the specified test equipment or its equivalent.

4. Correct impedance matching is essential.

5. Avoid overload. Excessive signal from a sweep generator might overload the front-end of the TV. When inserting signal markers, do not allow the marker generator to distort the test results.

6. Connect the TV only to an AC power source with voltage and frequency as specified on the back-cover nameplate.

7. Do not attempt to connect or disconnect any wires while the TV is turned on. Make sure that the power cord is disconnected before replacing any parts.

8. To protect against shock hazard, use an isolation transformer.

4-2-2 Fail Safe Circuit Check (FS)

1. The failsafe check must be the final step in servicing.

2. Turn the power switch ON and adjust customer controls for normal operation.

3. Temporarily short pin X to pin R on the main board with a jumper wire. Raster and sound will disappear.

4. The TV must remain in this state even after removing the jumper wire. This shows that the failsafe circuit is working properly.

5. To recover picture and sound, temporarily turn off the TV and allow the failsafe circuit more than 30 seconds to reset; switch power ON to restore normal picture and sound.

4-2-3 Focus Adjustment

Adjust the focus control (T444) for well defined scanning lines on the picture screen.

4-2-4 High Voltage Check

Caution: There is no high voltage adjustment on this chassis. The B+ power supply (+125 volts) must be checked to ensure the correct high voltage. The check point is the D807 cathode.

1. Connect a digital voltmeter to the second anode of the picture tube.

2. Turn on the TV. Set the Brightness and Contrast controls to minimum (zero beam current).

3. The high voltage should be about 24KV.

4. Rotate the Brightness control to both extremes. Ensure that the high voltage does not exceed the 30KV limit under any conditions.

4-2-5 CRT Gray Scale Adjustment

1. Set the Color control to minimum.
2. Adjust the Brightness and Contrast controls for a low light area.
3. Adjust the Red, Green and Blue Bias controls to obtain a gray raster of low brightness.
4. Adjust the Brightness and Contrast controls to maximum.
5. Adjust the Blue Drive and Red Drive controls for a properly white-balanced picture in high light areas.
6. Repeat steps 2 through 5 for correct gray scale.

4-2-6 Automatic Degaussing

A degaussing coil is mounted around the picture tube. External degaussing after moving the TV should be unnecessary, but the receiver must be properly degaussed upon installation.

The degaussing coil operates for about 1 second after the power is switched ON. If the set is moved or turned in a different direction, the power should be OFF for at least 10 minutes.

If the chassis or parts of the cabinet become magnetized, poor color purity will result; if this condition occurs, use an external degaussing coil. Slowly move the degaussing coil all around receiver, including its faceplate, picture tube, sides and front. Slowly withdraw the coil to a distance of about 6 feet before turning the TV OFF or disconnecting it from the AC source.

If color shading still persists, do the following Color Purity and Convergence adjustments.

4-2-7 Color Purity Adjustment

1. If a magnetic-tape beam bender is mounted on the neck of the picture tube, replace it with an adjustable-type (Magnet Assembly) prior to center-purity and center-convergence adjustments. Consult the replacement parts list for the correct part number.
2. Warm up the MVCR for 20 minutes, with Brightness set to maximum.
3. Fully degauss the receiver. Use an external degaussing coil.
4. Roughly adjust convergence.
5. Input a black and white signal.
6. Turn the low-light controls (Red and Blue) fully counterclockwise to obtain a green field. Adjust the Drive controls for a green field.
7. Loosen the Deflection Yoke clamp screw, and move the Deflection Yoke as close to the purity magnet as possible.
8. Loosen the purity magnet clamp. Adjust the purity magnet to set a vertical green raster precisely at the center of the screen. Then tighten the clamp.
9. Slowly move the Deflection Yoke forward, and adjust it for the best overall green screen.
10. Tighten the Deflection Yoke clamp screw.
11. Produce a blue and red raster. Turn the bias controls fully clockwise. Ensure that good purity is obtained on each field.

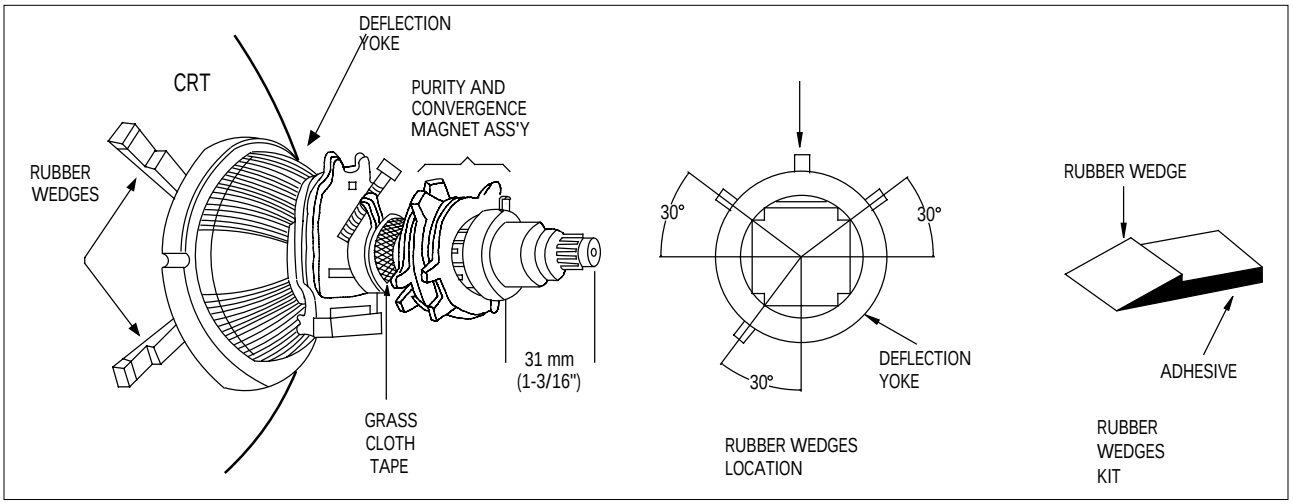


Fig. 4-5 Tube Assembly

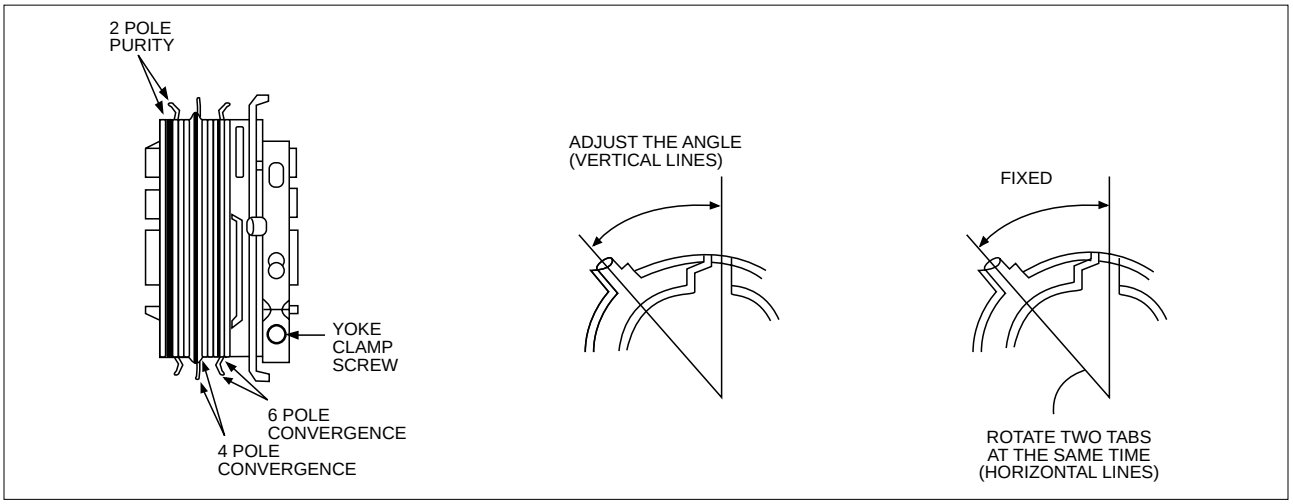


Fig. 4-6 Purity and Convergence Magnets

4-2-8 Center Convergence Adjustment

1. Before attempting convergence adjustments, the receiver should be powered on for at least 20 minutes.

2. Input a crosshatch pattern from a color bar generator.

3. Adjust the Brightness and Contrast controls for a well defined pattern.

4. Adjust the two tabs of the 4-pole magnets. Change the angle between the tabs, and superimpose red and blue vertical lines in the center area of the picture screen.

5. Next, turn both tabs at the same time. Keep the angle constant, and superimpose red and blue horizontal lines at the center of the screen.

6. Adjust the two tabs of 6-pole magnets. Superimpose the red/blue lines with the green. Adjusting the angle affects the horizontal lines.

7. Repeat adjustments 3, 4 and 5. Because the 4-pole and 6-pole magnets interact, the dot movement is complex.

Fig. 4-7 Center Convergence Adjustment

4-2-9 Circumference Convergence Adjustment

1. Tilt the yoke by loosening the clamp screw.
2. Insert a temporary mounting wedge. Do not remove the cover paper on the adhesive part of the wedge.
3. Tilt the front of the Deflection Yoke up or down to obtain the best convergence in circumference. Push the mounted wedge into the space between the picture tube and the yoke. This will hold the yoke temporarily in place.
4. Place the other wedge into the bottom space and remove the cover paper.
5. Tilt the front of the yoke right or left to obtain better convergence in circumference.

Fig. 4-8 Circumference Convergence Adjustment

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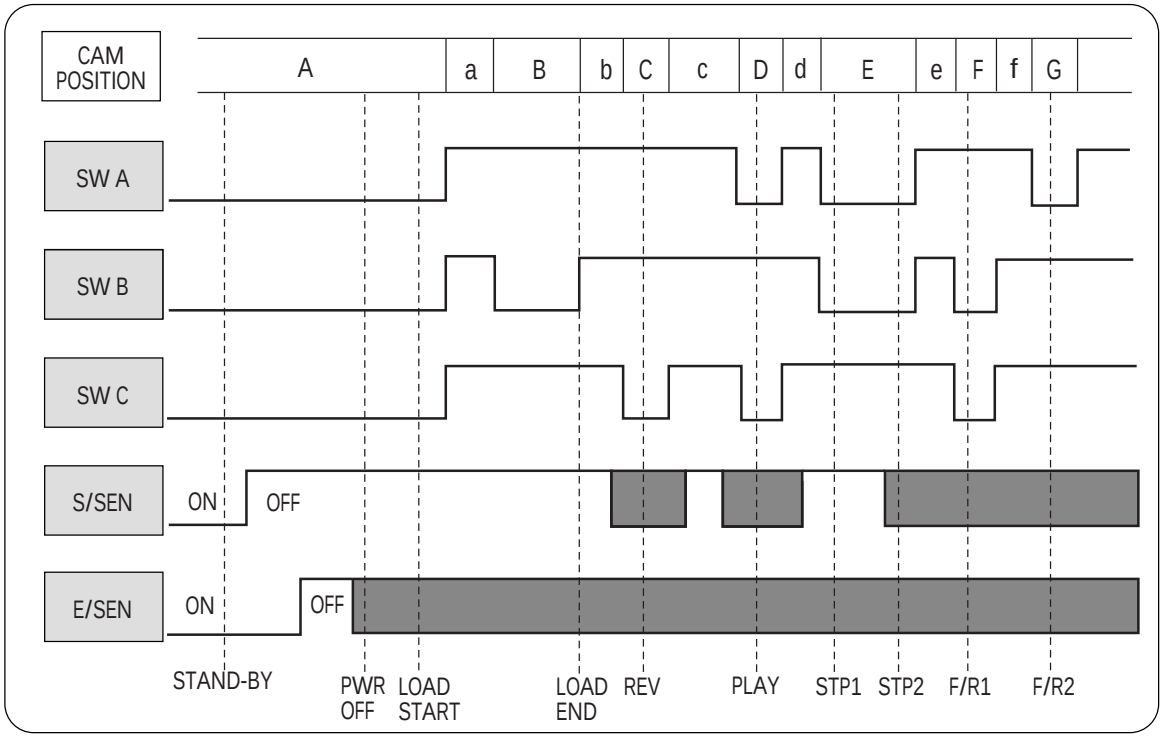
5. Timing Chart

5-1 Program S/W Timing Chart



START/END SENSOR : ON - "L", OFF - "H"

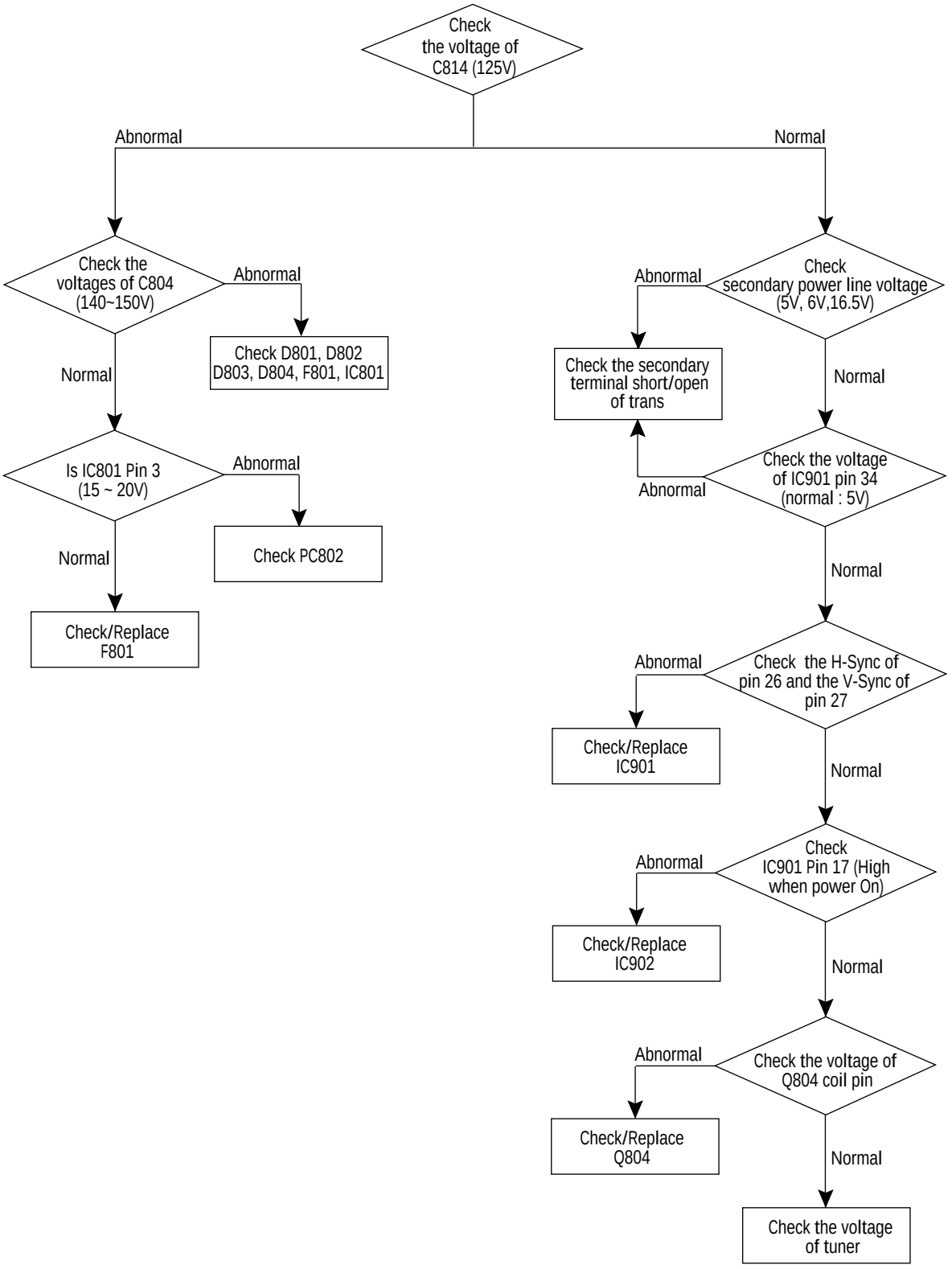
: DON'T CARE

POSITION	CAM S/W			START SEN	ACTION MODE
	A	B	C		
STAND BY	0	0	0	0	Eject
POWER OFF	0	0	0	1	Unload Power Off
LOADING START	0	0	0	1	(Tape loading start point)
LOADING END	1	0 →1	1	1	(Tape loading end point)
REV	1	1	0	X	Reverse Picture Search, Reverse SLOW
PLAY	0	1	0	X	Play, Rec, F-PS, Still, SLOW, F-ADV
STOP1	0	0	1	1	Stop (Play position 5 Min, over)
STOP2	0	0	1	X	(MAIN Break ON MODE)
FF/REV1	1	0	0	X	High speed Rew, Low speed FF
FF/REV2	0	1	1	X	High speed FF, Low speed REW

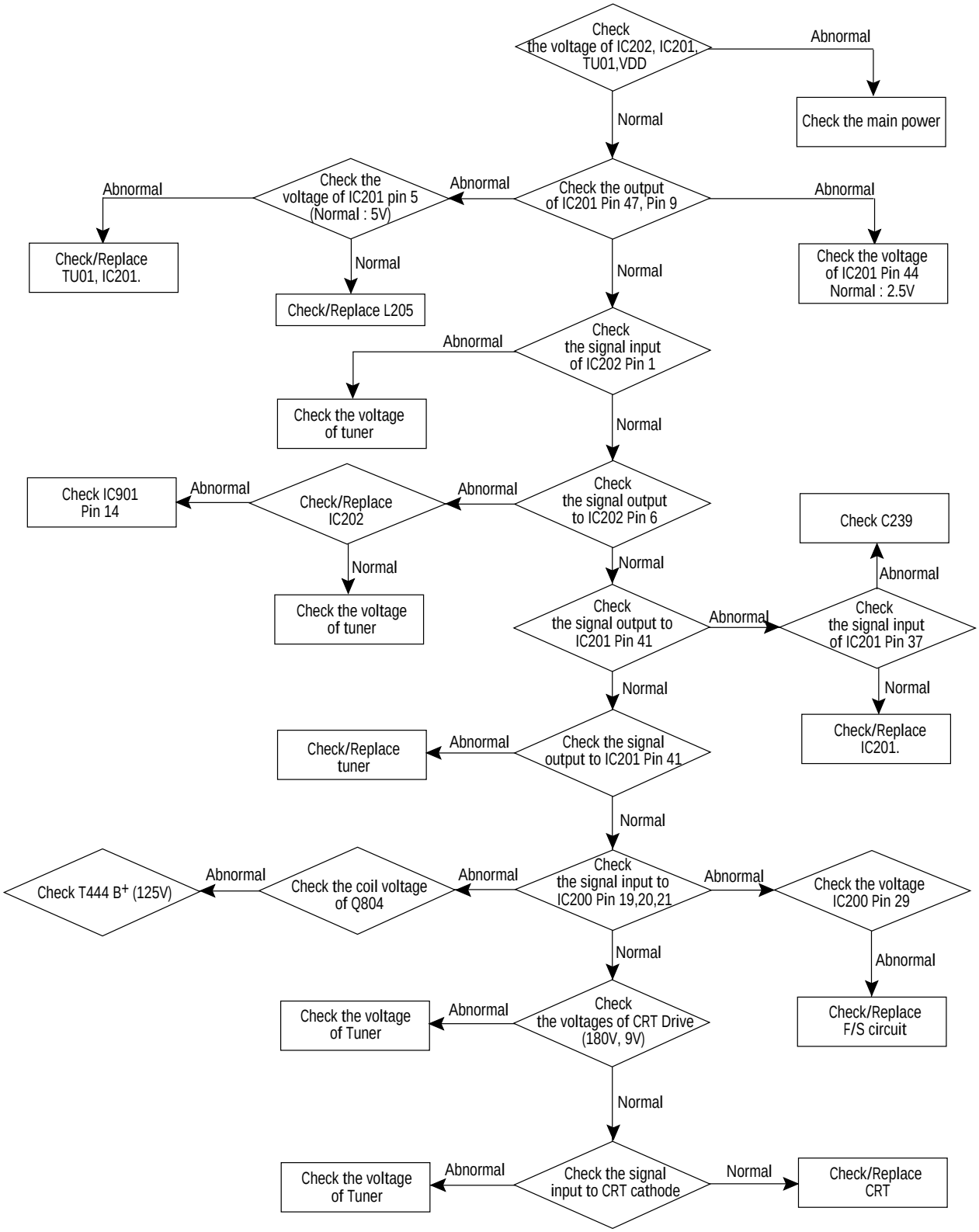
MEMO

6. Troubleshooting

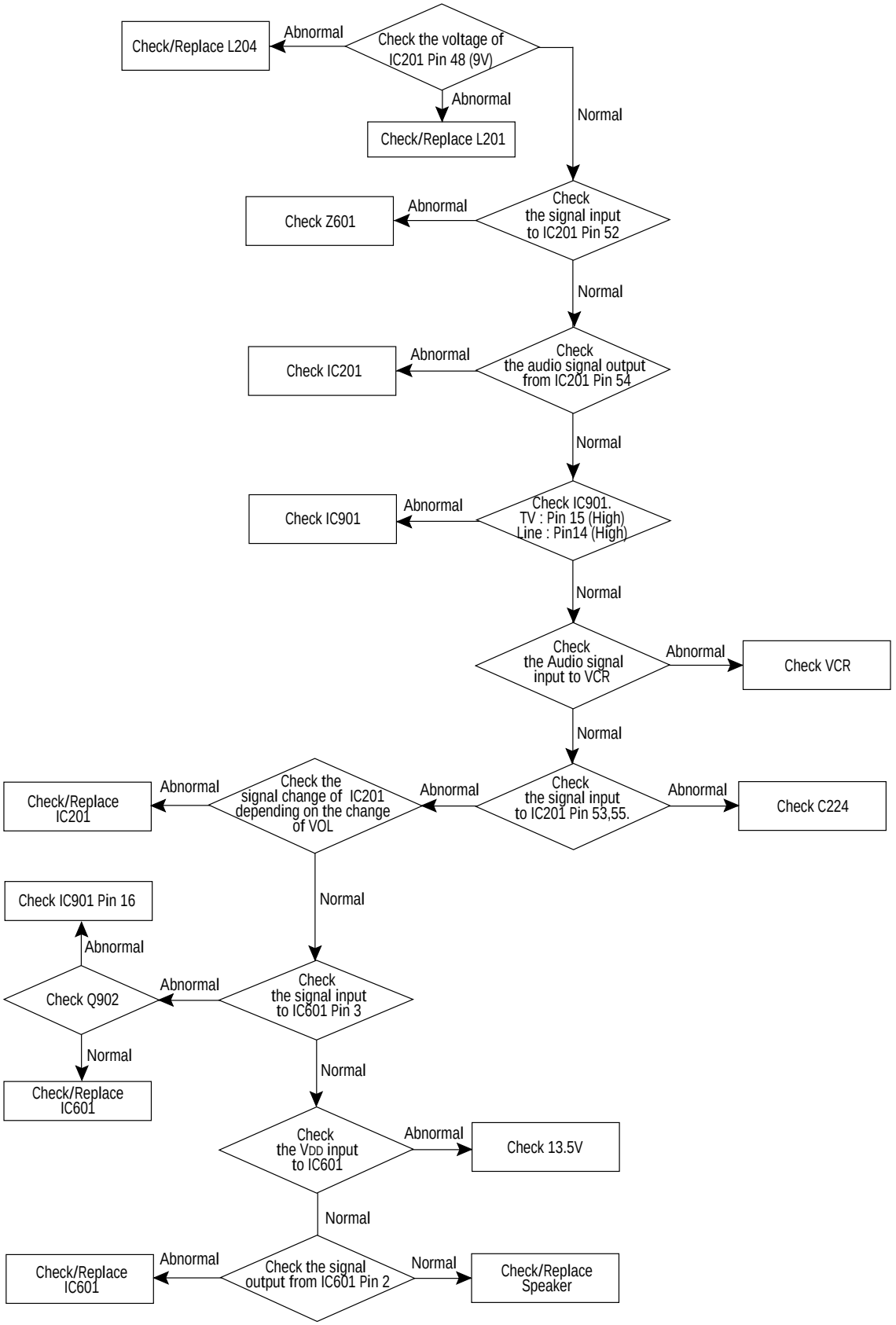
6-1 No Power (No Raster, No Sound, Power Led Off)



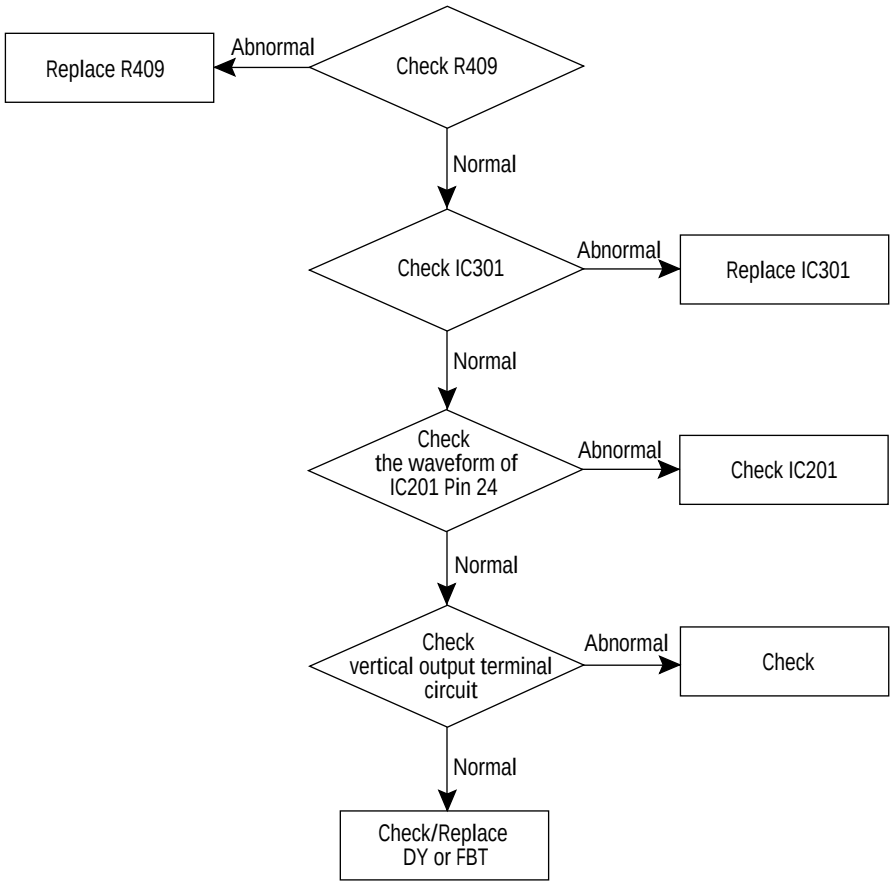
6-2 No Picture or Raster



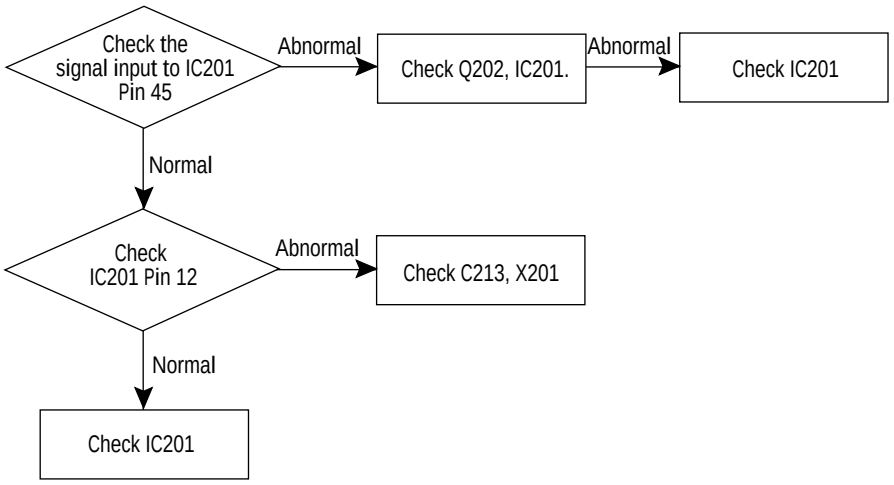
6-3 No Sound (Picture OK)



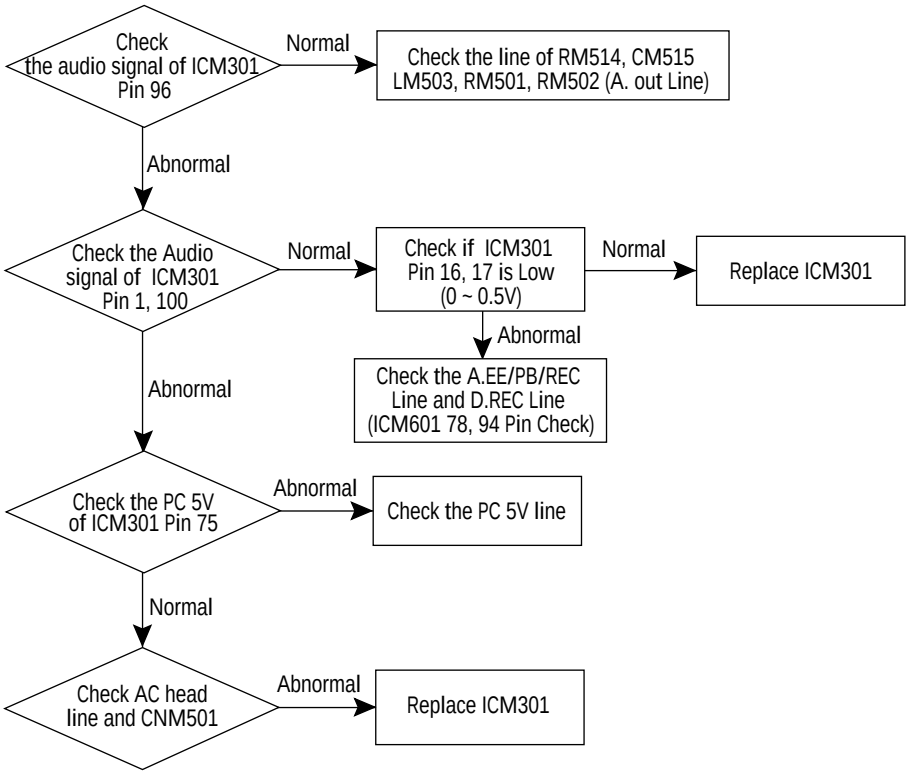
6-4 No Vert Scan



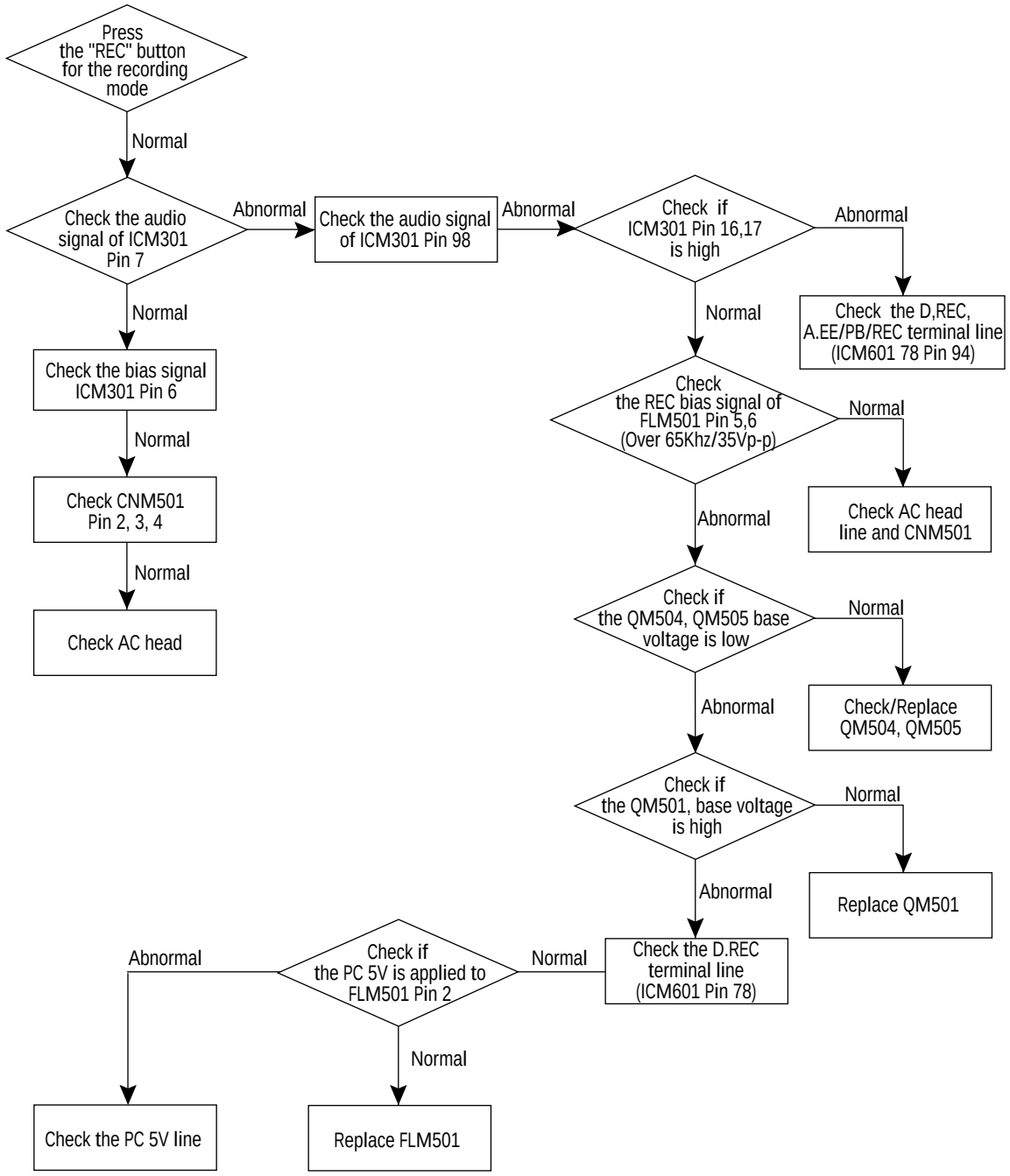
6-5 No Color



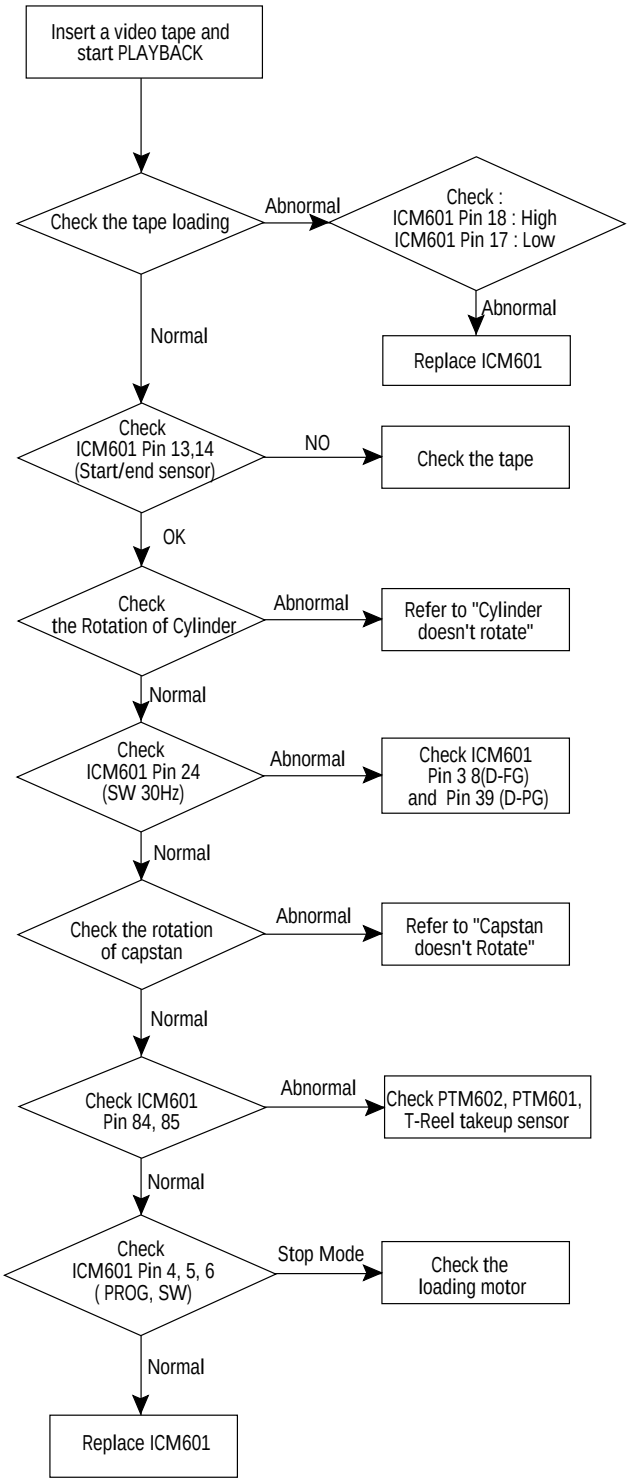
6-6 No Audio During Playback



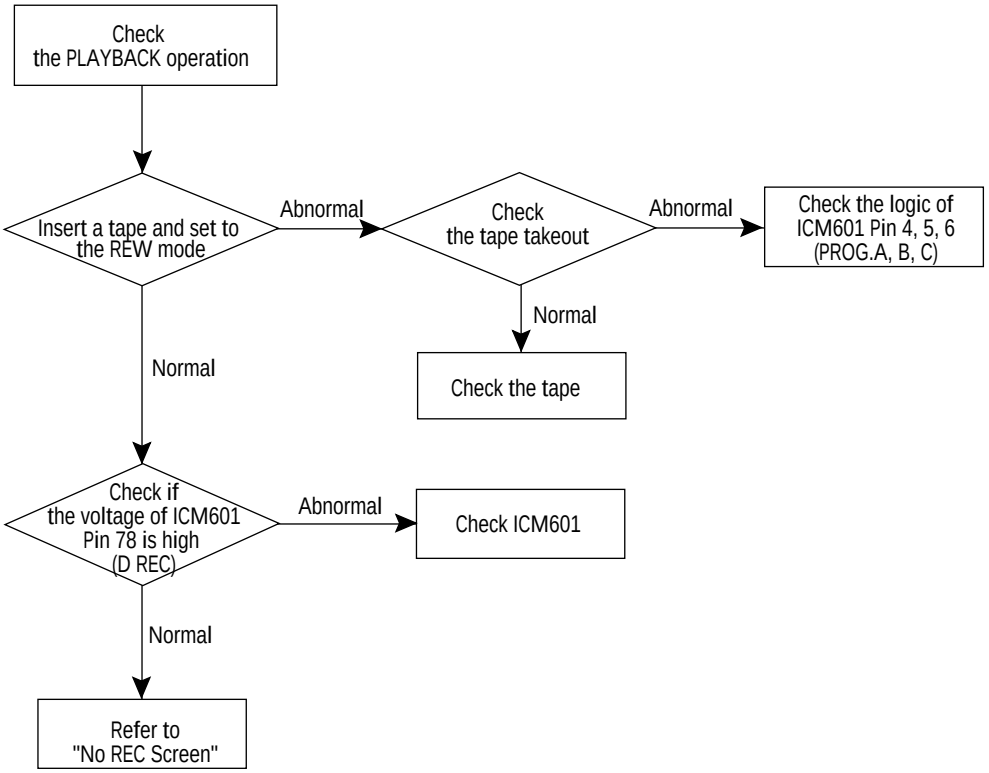
6-7 No Audio During Record


Press the "REC" button for the recording mode
Normal
Check the audio signal of ICM301 Pin 7
Abnormal
Check the audio signal of ICM301 Pin 98
Abnormal
Check if ICM301 Pin 16,17 is high
Abnormal
Check the D,REC, A.EE/PB/REC terminal line (ICM601 78 Pin 94)
Normal
Check the bias signal ICM301 Pin 6
Normal
Check CNM501 Pin 2, 3, 4
Normal
Check AC head
Check the REC bias signal of FLM501 Pin 5,6 (Over 65Khz/35Vp-p)
Normal
Check AC head line and CNM501
Abnormal
Check if the QM504, QM505 base voltage is low
Normal
Check/Replace QM504, QM505
Abnormal
Check if the QM501, base voltage is high
Normal
Replace QM501
Abnormal
Check the D.REC terminal line (ICM601 Pin 78)
Normal
Check if the PC 5V is applied to FLM501 Pin 2
Abnormal
Check the PC 5V line
Normal
Replace FLM501

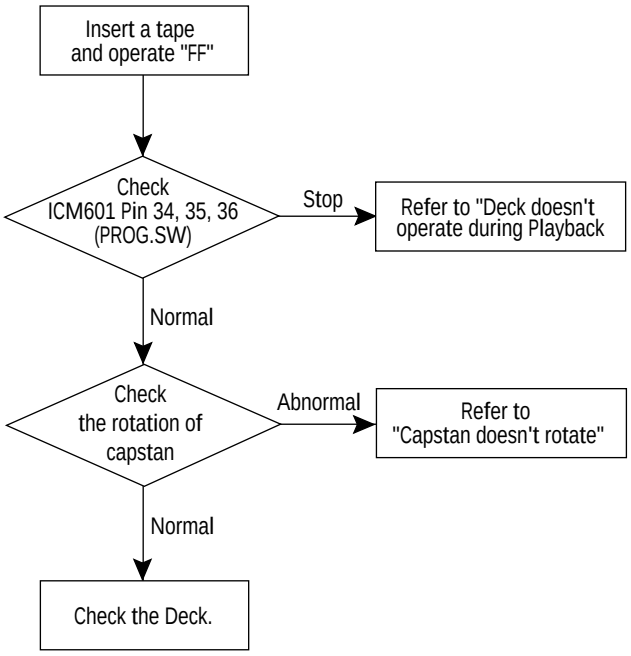
6-8 No Playback



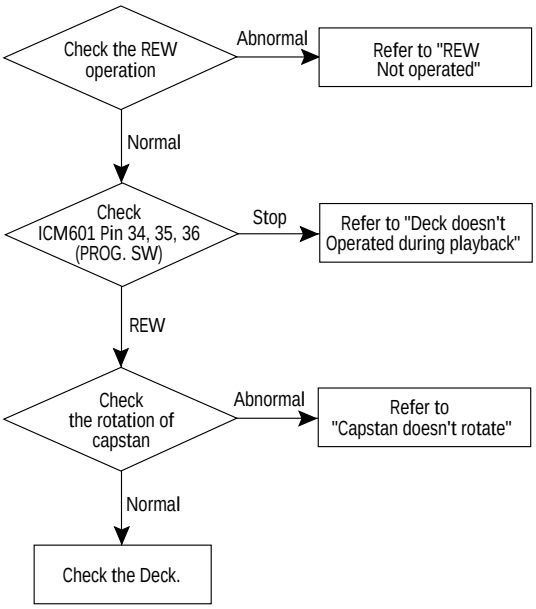
6-9 REC Doesn’t Operate



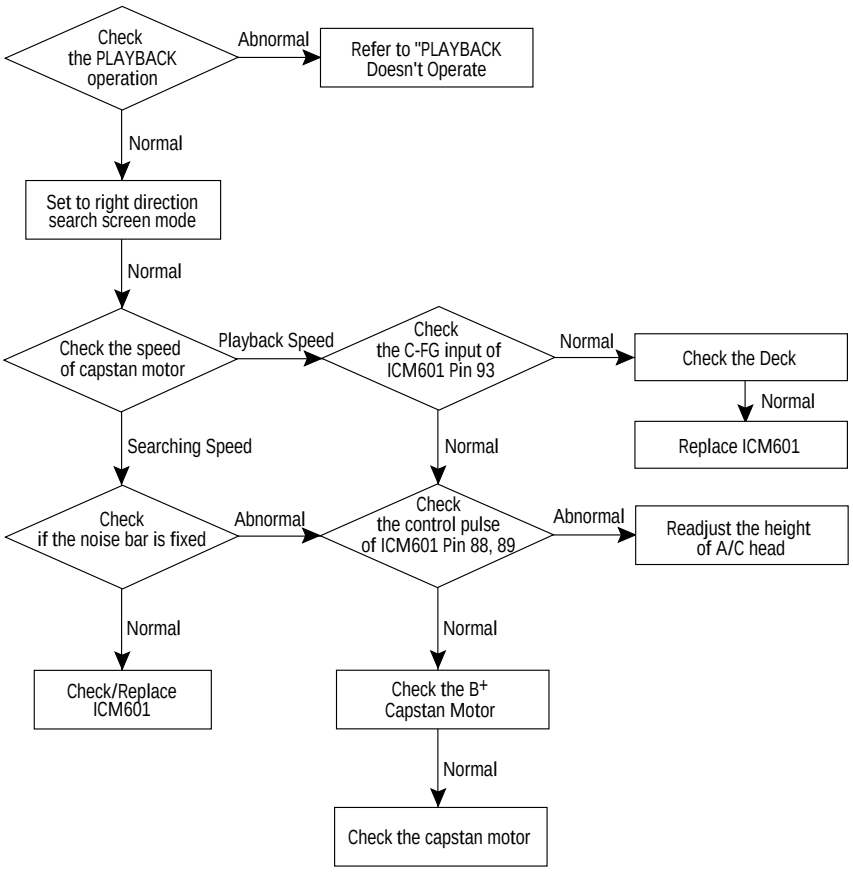
6-10 ”FF” Doesn’t Operate



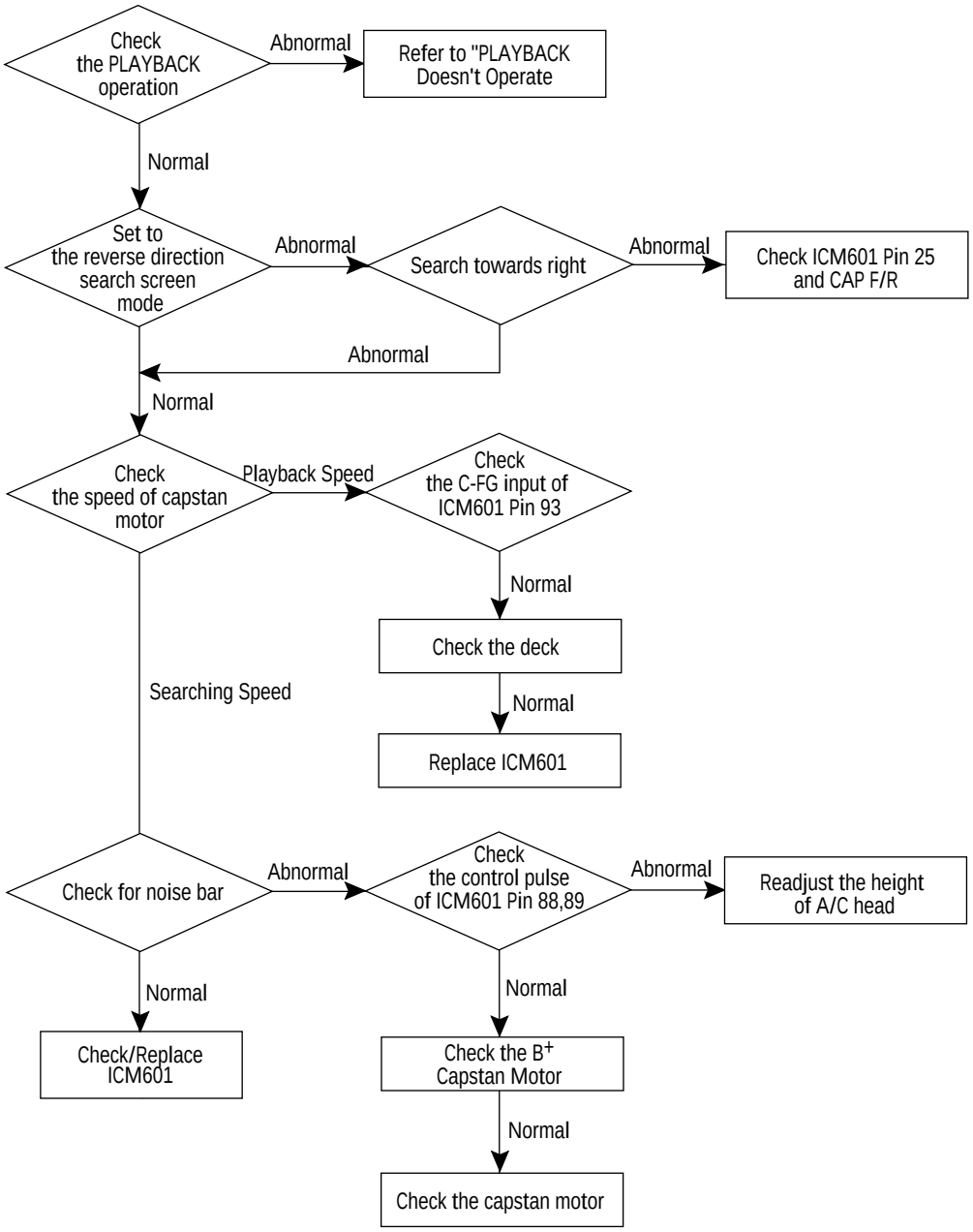
6-11 “REW” Doesn’t Operate



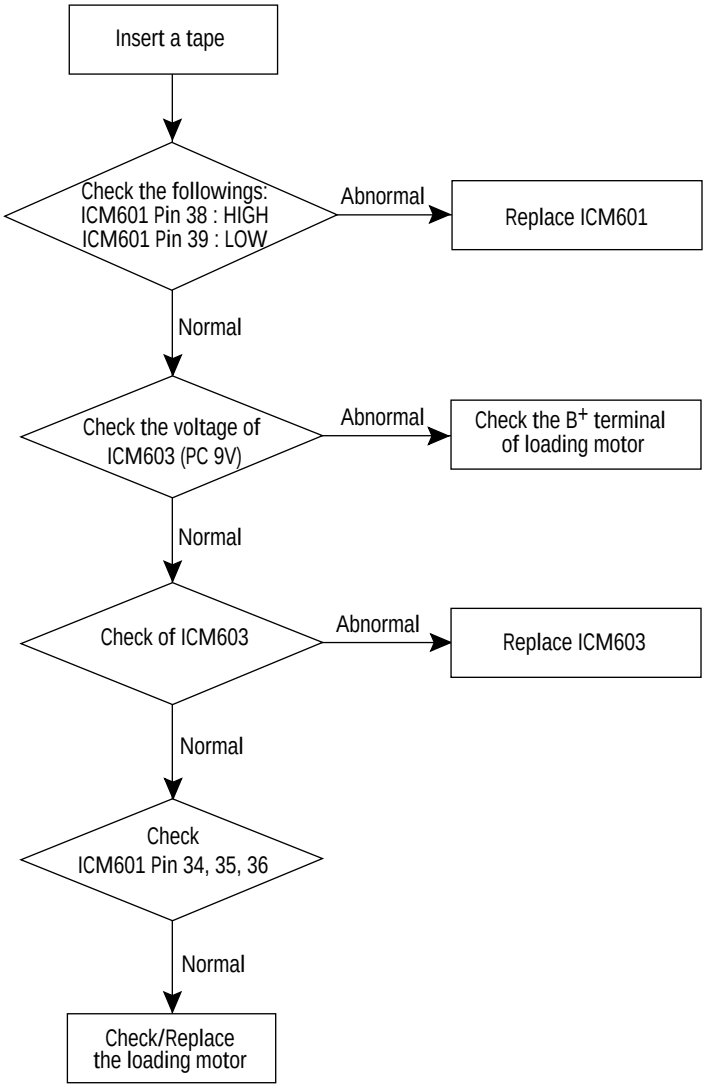
6-12 “Forward Direction Search Screen” Doesn’t Operate



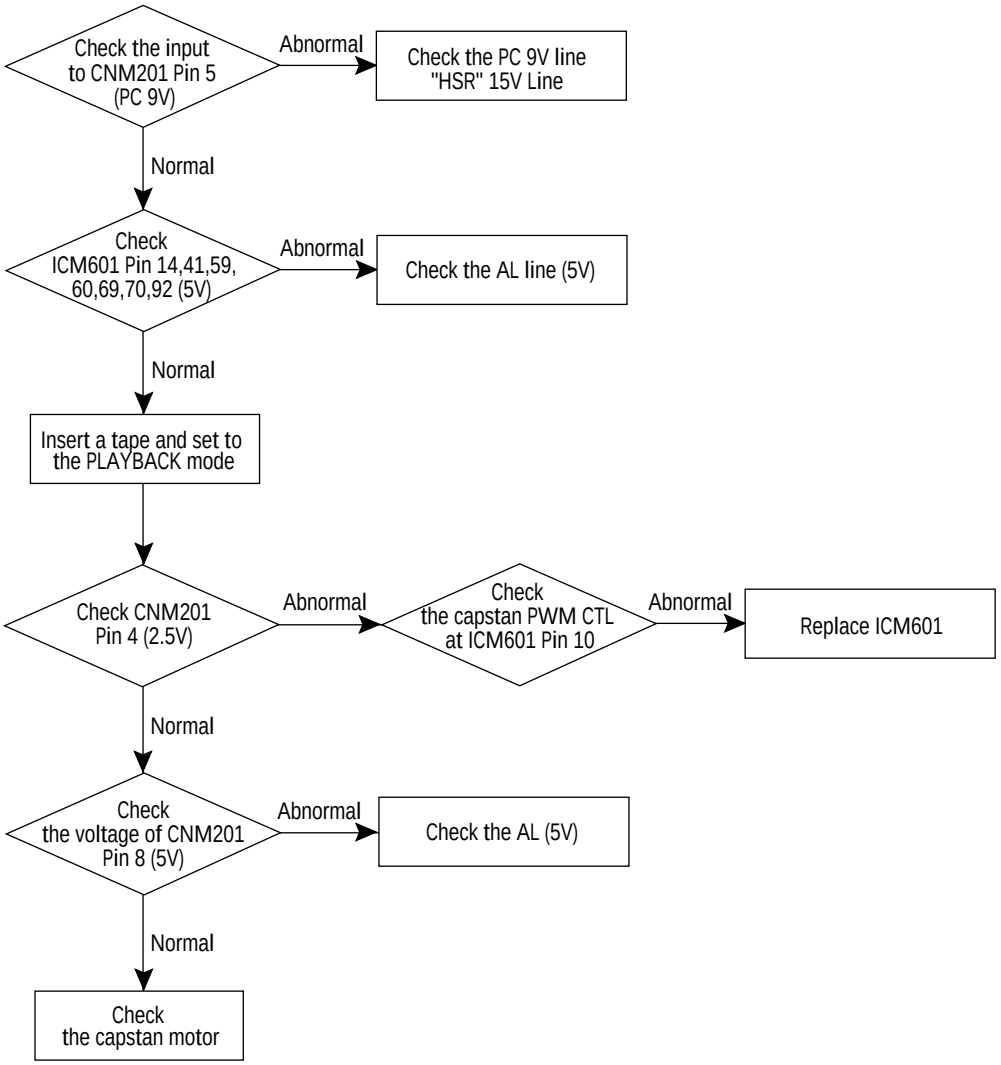
6-13 “ Reverse Direction Search Screen “ Doesn’t Operate



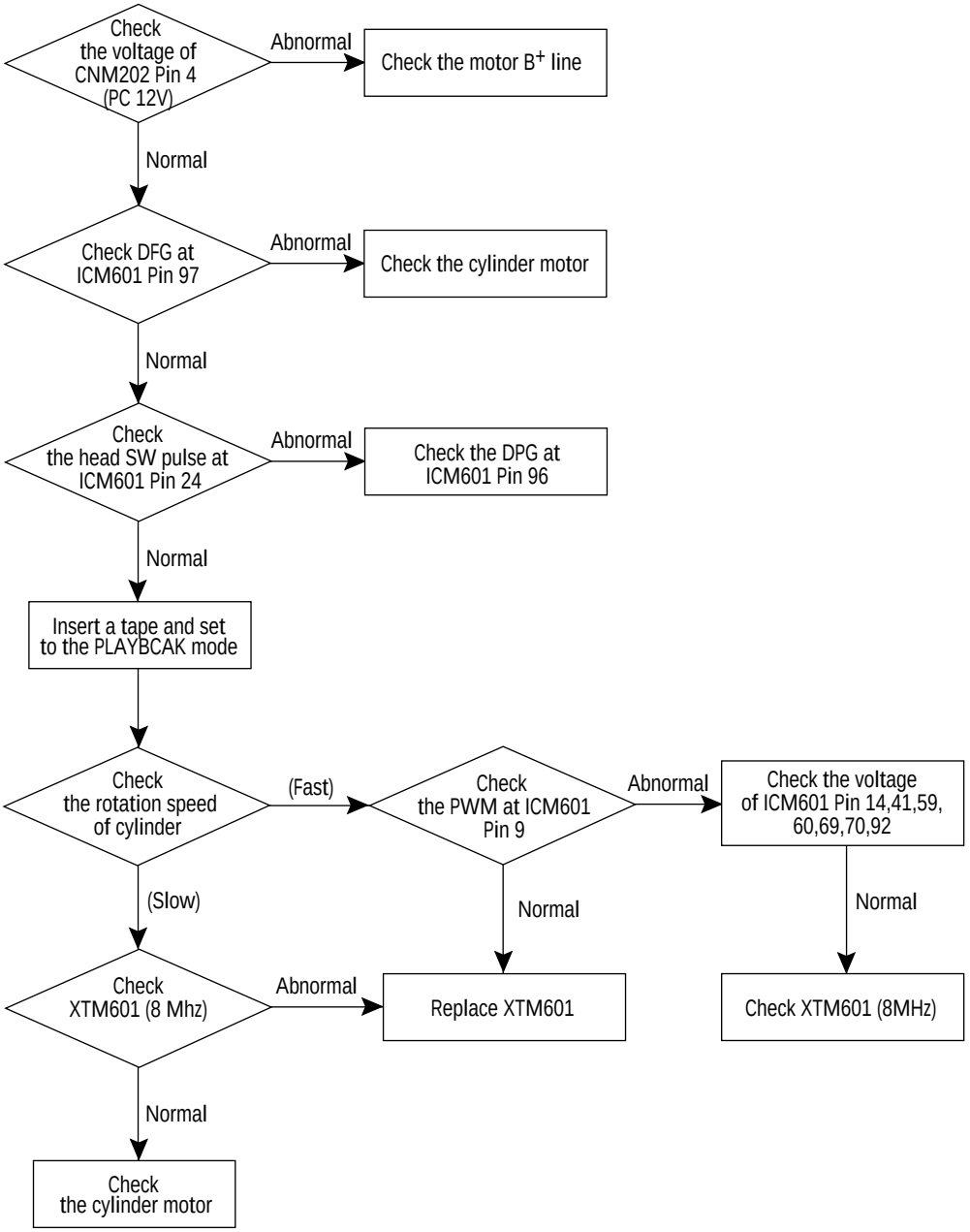
6-14 Tape Doesn't Load



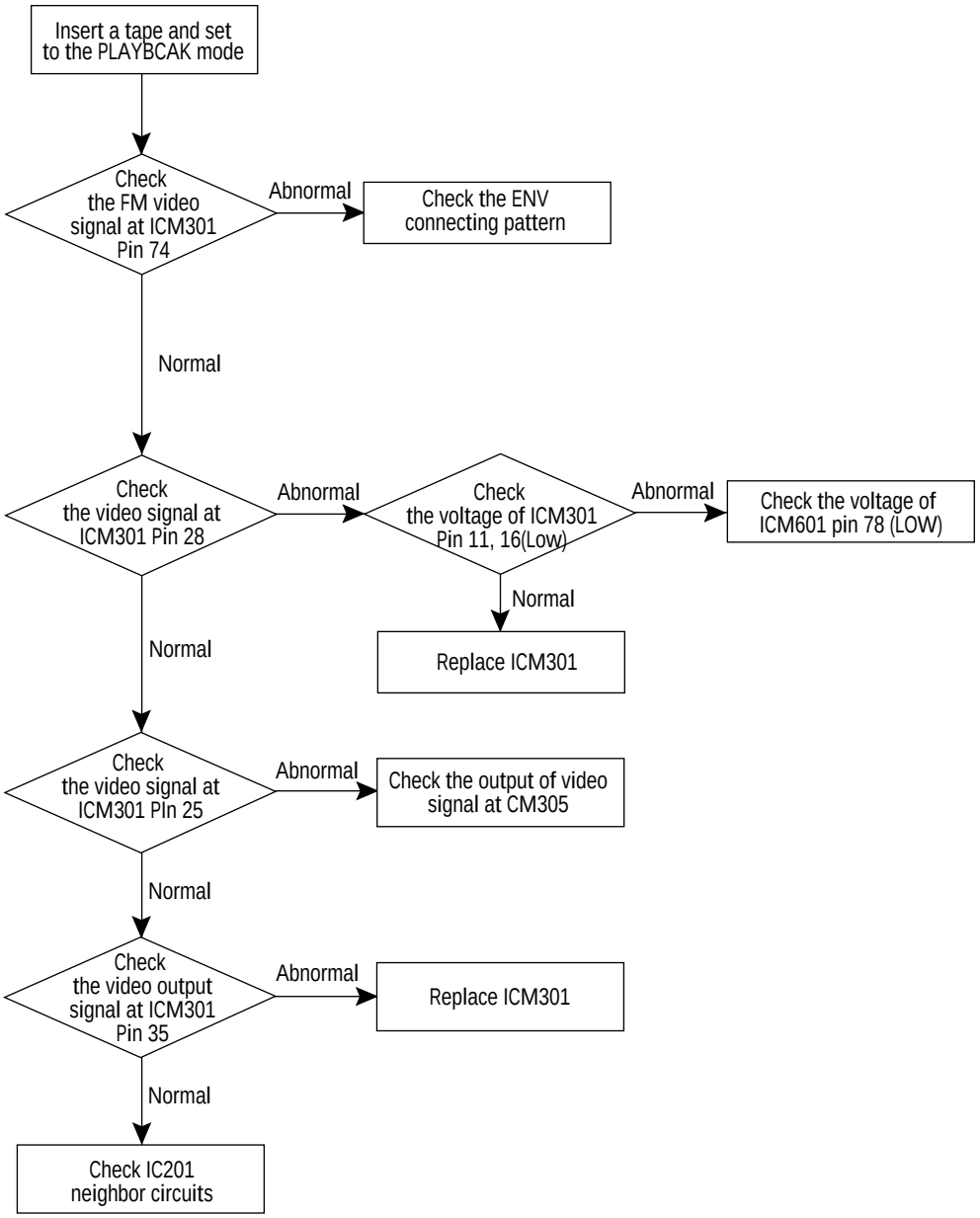
6-15 Capstan Doesn't Rotate



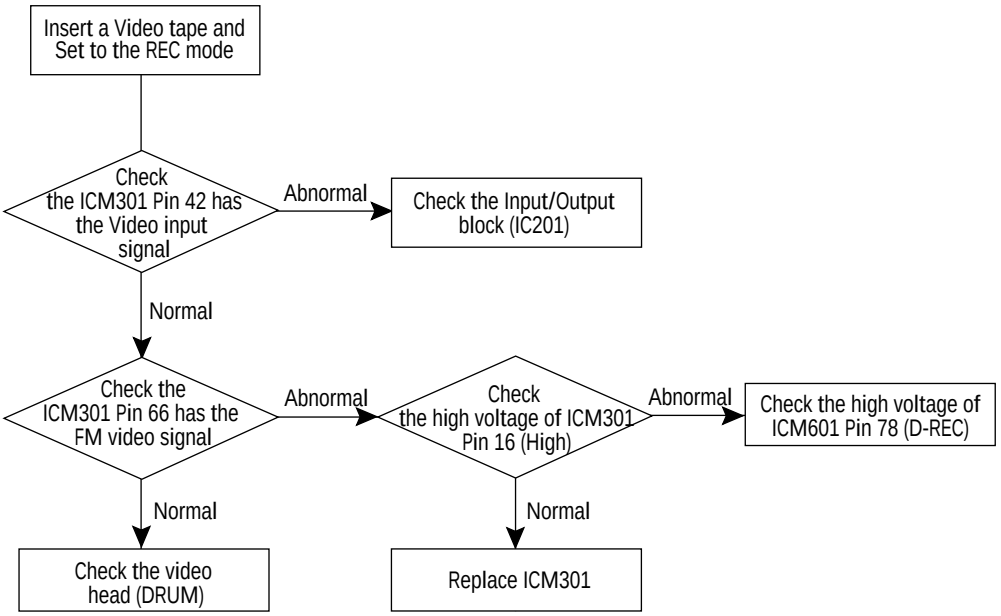
6-16 Cylinder Doesn't Rotate



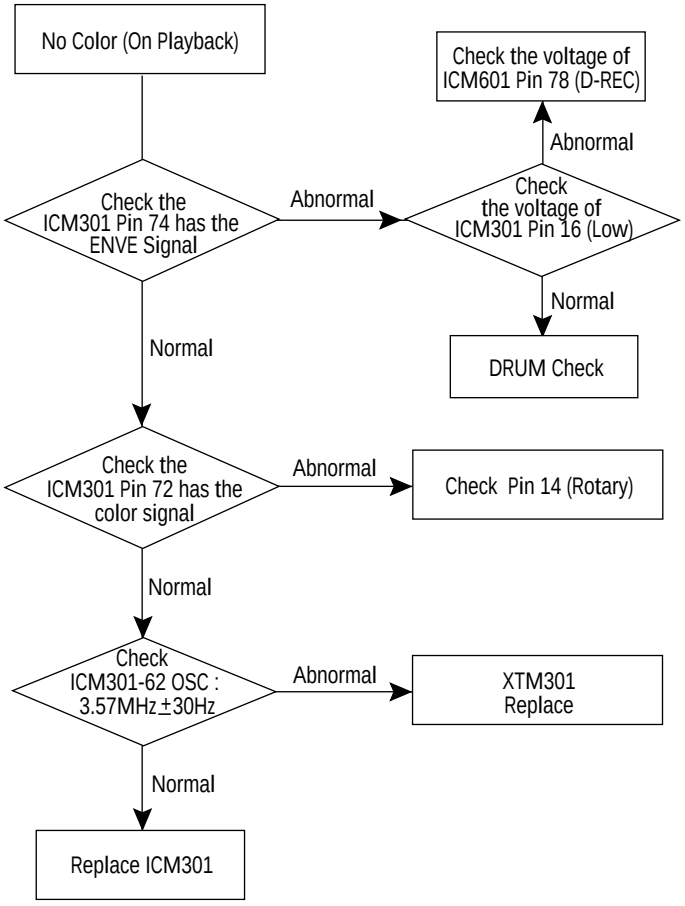
6-17 No Picture During Playback


Insert a tape and set to the PLAYBCAK mode
Check the FM video signal at ICM301 Pin 74
Abnormal
Check the ENV connecting pattern
Normal
Check the video signal at ICM301 Pin 28
Abnormal
Check the voltage of ICM301 Pin 11, 16(Low)
Abnormal
Check the voltage of ICM601 pin 78 (LOW)
Normal
Replace ICM301
Normal
Check the video signal at ICM301 PIn 25
Abnormal
Check the output of video signal at CM305
Normal
Check the video output signal at ICM301 Pin 35
Abnormal
Replace ICM301
Normal
Check IC201 neighbor circuits

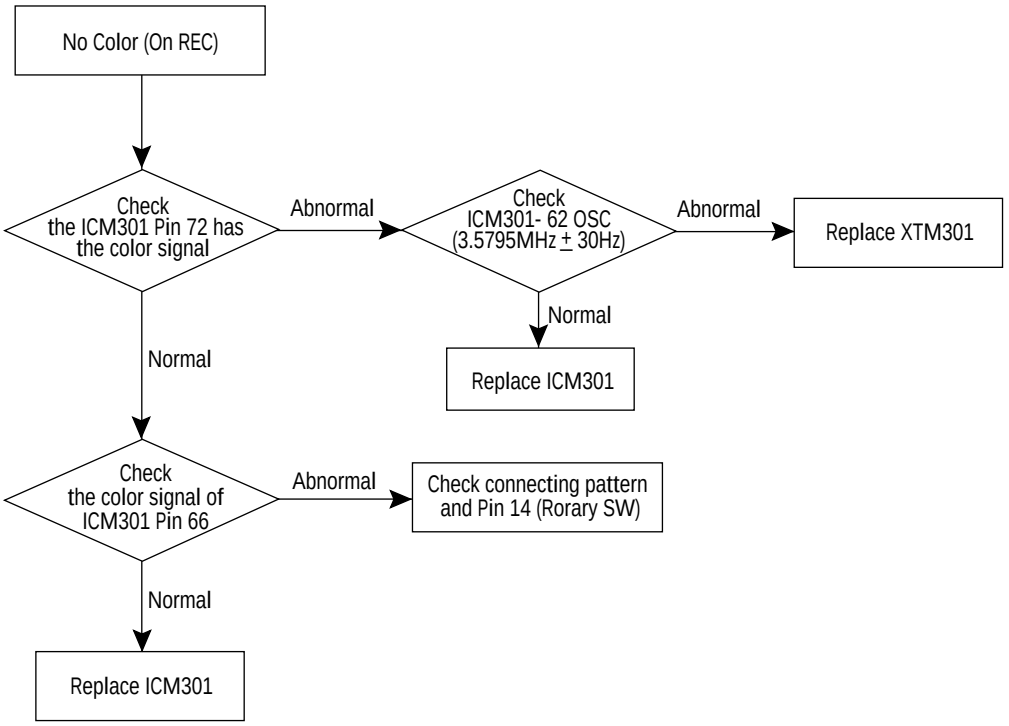
6-18 No Picture During Record


Insert a Video tape and Set to the REC mode
Check the ICM301 Pin 42 has the Video input signal
Abnormal
Check the Input/Output block (IC201)
Normal
Check the ICM301 Pin 66 has the FM video signal
Abnormal
Check the high voltage of ICM301 Pin 16 (High)
Abnormal
Check the high voltage of ICM601 Pin 78 (D-REC)
Normal
Normal
Check the video head (DRUM)
Replace ICM301

6-19 No Color During Playback



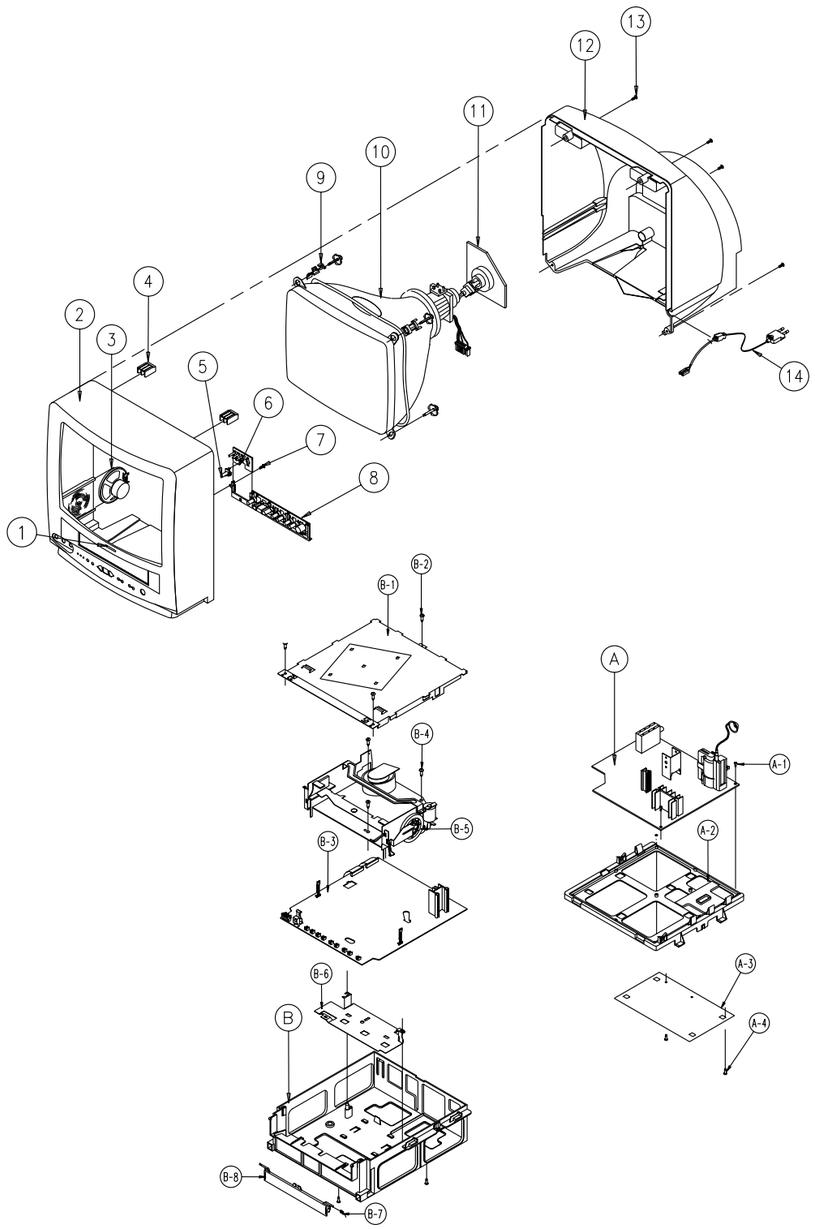
6-20 No Color During Record



MEMO

7. Exploded View & Parts List

7-1 CMC13003X/KMT



No	Code No.	Description;Specification	Q'ty	Remark
1		DELETE ITEM		
2	AA64-30093W	CABINET FRONT;T3350,BK708P K-MARK,HIPS,V0,BL	1	
3	AA96-10014A	ASSY-SPEAKER;-,8ohm,2W,77BR02N,-,L200	1	
4	AA61-40015A	BOSS-CABINET;-,HIPS,HB,NTR,-,-	2	
5	AA64-01229A	WINDOW REMOCON;DP,T3350,-,-,-,-,-,-,AA64-4002	1	
6	AA64-40160A	INDICATOR-LED;-,T3350,-,PC,-,-,-	1	
7	AA60-10008A	SCREW-TAPPING;TH,+,M3,L10,ZPC(YEL),SWRCH18A,	4	
8	AA64-10001K	KNOB-FAMILY;T3350,ABS,-,BLK,BK708P NO-SILK	1	
9	AA60-10050R	SCREW-ASSY;WC,HH,+,M5,L31.5,SWRCH18A,ZPC(	4	
10	AA03-10001D	CRT-COLOR;-,A34KQV42X,+380MG,14,90DEG,5	1	
11	3704-000103	SOCKET-CRT;10P,22.5,14.3,SN,ISMS01S/BK	1	
12	AA64-30356A	CABINET-BACK;-,T3350,-,HIPS,V0,BLK,-,-	1	
13	6002-000514	SCREW-TAPPING;RH,+,2,M4,L15,ZPC(BLK),SWRCH18	4	
14	AA96-20129A	ASSY-POWER,CORD;-,EP2/YES,H/C300,ME301P,AA61-2	1	
A	AA94-02426A	ASSY PCB MAIN(OPT);CMC13003X/KMT,V15A,SEA,-	1	
A-1	AA60-10008A	SCREW-TAPPING;TH,+,M3,L10,ZPC(YEL),SWRCH18A,	9	
A-2	AA61-20231B	HOLDER-CHASSIS;DP,T3350,-,-,-,AA61-20016A	1	
A-3	AA63-00308A	SHIELD-PCB;DP,T3350,-,-,AA63-00075A(6KG)	1	
A-4	6002-000511	SCREW-TAPPING;RH,+,2,M3,L8,ZPC(YEL),SWRCH18A	2	
B	AA61-00008C	FRAME-DECK;TVCR,-,-,-,-,-,AA61-00004B	1	
B-1	AA63-00179A	COVER-FRAME TOP ASSY;DP,TVCR NT SAMEX,AA63-00150A,S	1	
B-2	6003-001022	SCREW-TAPTITE;RH,+,B,M3,L12,ZPC(BLK),SWRCH18	3	
B-3	AA95-00540A	ASSY-PCB,M/DECK;-,2HD,V15A,NTSC,TWIN,-,-	1	
B-4	6002-000522	SCREW-TAPPING;TH,+,2,M4,L15,ZPC(BLK),SWRCH18	3	
B-5	AA91-00282A	ASSY DECK;-,NTSC,2HD,SVTW-M2N/TTS	1	
B-6	AA63-00007A	SHIELD-BOTTOM;DP,SPTE,-,AA63-40313A,TVN-502V	1	
B-7	AA61-00050A	SPRING-DOOR;-,SUS304,-,-,-,-,0.5,OD6,H9.7,	1	
B-8	AA64-00032J	DOOR-HOUSING;DP,T3350 K-MART,-,-,-,-,-,AA64	1	

8. Electrical Parts List

8-1 CMC13003X/KMT

Loc. No.	Code No.	Description ; Specification	Remark
		ASSY PCB MAIN(OPT)	
*	AA94-02426A	ASSY PCB MAIN(OPT);CMC13003X/KMT,V15A,SEA,-	
⚠ IC901	AA13-00029A	IC-MCU;-,SZM-644E1(R4185),16BIT,SDIP,	
L205	AA26-10004C	TRANS-IF;-,7MG,VIF,0.37uH,7mm,27pF,52.3	
L201	AA26-10004K	TRANS-IF;-,7MG,SIF,11.5uH,7mm,100pF,4.8	
⚠ T801	AA26-20007U	TRANS-SWITCHING;-,90~260V,125V/16.5V/9.5V,-,EE	
⚠ T444	AA26-30005S	TRANS-FLYBACK;-,FSV-14A004(S),14',125V	
⚠ T401	AA26-50001B	HORIZ.DRIVE;-,7.1mH,102uH,10-20uH,YL081,ST	
CN802	AA27-20004C	COIL-DEGAUSSING;-,14,4.5ohm,30T,L890,D	
L401	AA27-30001B	COIL-LINEARITY;-,195uH,QIC1010,PI0.4,4.5x21.5	
L801	AA29-30001R	FILTER-LINE;-,6mH,0.8A,-,SQ1913	
	AA39-20010D	LEAD-CONNECTOR,ASSY;-,YFH800-01,S,1P,400,1617#22	
CN501	AA39-20620A	LEAD CONNECTOR-ASSY;-,YBNH025-09,S,9P,300mm,1007#2	
⚠ TU01	AA40-10006U	TUNER-F/S;TECC1070PG31A(S),NTSC,TR,181CH	
PCB	AA41-11026C	PCB-MAIN;V15A,1L,FR-1,245X245X1.6T,1A,-	
	AA65-30009A	CLAMP-FBT;ABS,V0,BLK,-,-,-	
	AA65-30013A	CLAMP-WIRE;NYLON-66,V0,NTR,DAWH-45N,-,-	
	AA65-30109A	CLAMP-FBT;NYLON-66,V2,BLK,-,-,-	
⚠ IC301	1204-000475	IC-VIDEO SYSTEM;KA2131,SIP,10P,-,PLASTIC,27.6V	H/SINK
⚠ IC802	1203-000284	IC-POSI.FIXED REG.;7806,TO-220,3P,-,PLASTIC,5.75/	H/SINK
	AA61-11028A	BRACKET;-,-,SECC,T1.0,-,-,-	
⚠ IC801	1203-001493	IC-PWM CONTROLLER;3S0765RF,TO3PF-5L,5,210, PLASTI	H/SINK
D202	0401-000005	DIODE-SWITCHING;1N4148,100V,200MA,DO-35,TP	
D203	0401-000005	DIODE-SWITCHING;1N4148,100V,200MA,DO-35,TP	
D204	0401-000005	DIODE-SWITCHING;1N4148,100V,200MA,DO-35,TP	
D206	0401-000005	DIODE-SWITCHING;1N4148,100V,200MA,DO-35,TP	
D207	0401-000005	DIODE-SWITCHING;1N4148,100V,200MA,DO-35,TP	
D208	0401-000005	DIODE-SWITCHING;1N4148,100V,200MA,DO-35,TP	
⚠ D401	0401-000005	DIODE-SWITCHING;1N4148,100V,200MA,DO-35,TP	
D903	0401-000005	DIODE-SWITCHING;1N4148,100V,200MA,DO-35,TP	
D904	0401-000005	DIODE-SWITCHING;1N4148,100V,200MA,DO-35,TP	
⚠ D815	0402-000132	DIODE-RECTIFIER;1N4004,400V,1A,DO-41,TP	
⚠ D817	0402-000132	DIODE-RECTIFIER;1N4004,400V,1A,DO-41,TP	
DX02	0402-000132	DIODE-RECTIFIER;1N4004,400V,1A,DO-41,TP	
⚠ D402	0402-000132	DIODE-RECTIFIER;1N4004,400V,1A,DO-41,TP	
⚠ D810	0402-000132	DIODE-RECTIFIER;1N4004,400V,1A,DO-41,TP	
⚠ D813	0402-000132	DIODE-RECTIFIER;1N4004,400V,1A,DO-41,TP	
⚠ D804	0402-000213	DIODE-RECTIFIER;ERB12-06,600V,1.0A,DO-41,TP	
⚠ D801	0402-000213	DIODE-RECTIFIER;ERB12-06,600V,1.0A,DO-41,TP	
⚠ D802	0402-000213	DIODE-RECTIFIER;ERB12-06,600V,1.0A,DO-41,TP	
⚠ D803	0402-000213	DIODE-RECTIFIER;ERB12-06,600V,1.0A,DO-41,TP	
⚠ D807	0402-000540	DIODE-RECTIFIER;RU20A,600V,1.5A,-,TP	
⚠ D808	0402-001105	DIODE-RECTIFIER;ERB43-04SV1,400V,1.0A,-,TP	
D301	0402-001105	DIODE-RECTIFIER;ERB43-04SV1,400V,1.0A,-,TP	
⚠ D403	0402-001105	DIODE-RECTIFIER;ERB43-04SV1,400V,1.0A,-,TP	
⚠ D404	0402-001105	DIODE-RECTIFIER;ERB43-04SV1,400V,1.0A,-,TP	
⚠ D405	0402-001105	DIODE-RECTIFIER;ERB43-04SV1,400V,1.0A,-,TP	
⚠ D407	0402-001105	DIODE-RECTIFIER;ERB43-04SV1,400V,1.0A,-,TP	
⚠ D805	0402-001105	DIODE-RECTIFIER;ERB43-04SV1,400V,1.0A,-,TP	
⚠ D806	0402-001105	DIODE-RECTIFIER;ERB43-04SV1,400V,1.0A,-,TP	
DX01	0403-000297	DIODE-ZENER;MTZ6.2B,6.2V,5.96-6.27V,500mW,	
DZ802	0403-000300	DIODE-ZENER;MTZ8.2B,8.2V,7.78-8.19V,500mW,	
D102	0403-000508	DIODE-ZENER;MTZJ5.6B,5.6V,5.45-5.73V,500mW	
D205	0403-000508	DIODE-ZENER;MTZJ5.6B,5.6V,5.45-5.73V,500mW	
DZ803	0403-000508	DIODE-ZENER;MTZJ5.6B,5.6V,5.45-5.73V,500mW	
DZ805	0403-000551	DIODE-ZENER;MTZ3.9B,3.9V,3.89-4.16V,500mW,	
D601	0403-000563	DIODE-ZENER;MTZ9.1B,9.1V,8.57-9.01V,500mW,	
DZ602	0403-000656	DIODE-ZENER;MTZ15C,15V,14.35-15.09V,500mW,	
D201	0403-000663	DIODE-ZENER;MTZ3.3B,3.3V,3.32-3.53V,500mW,	
D101	0403-000700	DIODE-ZENER;TZP33A,33V,31-35V,1W,DO-41,TP	
D901	0403-001373	DIODE-ZENER;MTZJ5.1A,4.81V-5.07V,500mW,D0-	
⚠ D814	0404-001056	DIODE-SCHOTTKY;RK16,60V,1.5A,DO-204AC,TP	
⚠ D809	0404-001056	DIODE-SCHOTTKY;RK16,60V,1.5A,DO-204AC,TP	
QX01	0501-000283	TR-SMALL SIGNAL;KSA539,PNP,400mW,TO-92,TP,120-	
⚠ Q804	0501-000316	TR-SMALL SIGNAL;KSA928A-Y,PNP,1W,TO-92L,-,160-	
⚠ Q805	0501-000369	TR-SMALL SIGNAL;KSC2331-Y,NPN,1W,TO-92L,-,120-	
⚠ Q402	0501-000369	TR-SMALL SIGNAL;KSC2331-Y,NPN,1W,TO-92L,-,120-	
Q902	0501-000389	TR-SMALL SIGNAL;KSC815,NPN,400mW,TO-92,TP,120-	
Q201	0501-000389	TR-SMALL SIGNAL;KSC815,NPN,400mW,TO-92,TP,120-	
Q202	0501-000389	TR-SMALL SIGNAL;KSC815,NPN,400mW,TO-92,TP,120-	
Q203	0501-000389	TR-SMALL SIGNAL;KSC815,NPN,400mW,TO-92,TP,120-	
Q204	0501-000389	TR-SMALL SIGNAL;KSC815,NPN,400mW,TO-92,TP,120-	
Q151	0501-000436	TR-SMALL SIGNAL;KTC3197,NPN,625mW,TO-92,TP,20-	
Q501	0501-002014	TR-SMALL SIGNAL;KSC2330-R,NPN,1W,TO-92L,TP,40-	
Q502	0501-002014	TR-SMALL SIGNAL;KSC2330-R,NPN,1W,TO-92L,TP,40-	
Q503	0501-002014	TR-SMALL SIGNAL;KSC2330-R,NPN,1W,TO-92L,TP,40-	
⚠ Q401	0502-001115	TR-POWER;KSC5386,NPN,50W,TO-3PF,ST,8-	
⚠ Q803	0504-000118	TR-DIGITAL;KSR1003,NPN,300MW,22K/22K,TO-9	
PC802	0604-001038	PHOTO-COUPLER;TR,130-260%,200mW,DIP-4,ST	
⚠ IC202	1001-000216	IC-RF/V1/AUDIO S/W;KA8404,SPDT CMOS,SIP,7P,-,SING	
⚠ IC902	1103-001107	IC-EEPROM;24C021C,256x8Bit,DIP,8P,300MIL	
⚠ IC601	1201-001200	IC-POWER AMP;7267,DIP,8P,346MIL,SINGLE,32dB	
⚠ IC903	1202-000001	IC-VOLTAGE COMP.;7533,TO-92,3P,-,SINGLE,-,-,PLA	
⚠ Q801	1203-001217	IC-POSI.ADJUST REG.;431,TO-92,3P,4.58MIL,PLASTIC,2	
⚠ IC201	1204-001259	IC-VIDEO SYSTEM;TA1282N,DIP,56P,600MIL,PLASTIC	
RP801A	1404-000208	THERMISTOR-PTC;7ohm,20%,120V,140V,40A,-,TP	
NT801	1404-001045	THERMISTOR-NTC;4.7ohm,15%,2900K,35.0mW,TP	
DZ804	1405-000152	VARISTOR;560V,2500A,14x8.5mm,TP	
DZ801	1405-000152	VARISTOR;560V,2500A,14x8.5mm,TP	
R302	2001-000003	R-CARBON;330ohm,5%,1/8W,AA,TP,1.8x3.2mm	
R301	2001-000003	R-CARBON;330ohm,5%,1/8W,AA,TP,1.8x3.2mm	
R513	2001-000005	R-CARBON;390ohm,5%,1/8W,AA,TP,1.8x3.2mm	
R514	2001-000005	R-CARBON;390ohm,5%,1/8W,AA,TP,1.8x3.2mm	
R516	2001-000005	R-CARBON;390ohm,5%,1/8W,AA,TP,1.8x3.2mm	
R930	2001-000006	R-CARBON;2.4KOHM,5%,1/8W,AA,TP,1.8X3.2M	
R503	2001-000007	R-CARBON;3KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
R158	2001-000007	R-CARBON;3KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
R159	2001-000007	R-CARBON;3KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
R501	2001-000007	R-CARBON;3KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
R502	2001-000007	R-CARBON;3KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
R817	2001-000019	R-CARBON(S);10OHM,5%,1/2W,AA,TP,2.4X6.4MM	
R412	2001-000020	R-CARBON(S);22OHM,5%,1/2W,AA,TP,2.4X6.4MM	
R809	2001-000022	R-CARBON(S);33OHM,5%,1/2W,AA,TP,2.4X6.4MM	
R416	2001-000022	R-CARBON(S);33OHM,5%,1/2W,AA,TP,2.4X6.4MM	
R444	2001-000109	R-CARBON(S);470OHM,5%,1/2W,AA,TP,2.4X6.4MM	
R828	2001-000117	R-CARBON(S);68OHM,5%,1/2W,AA,TP,2.4X6.4MM	
R404	2001-000117	R-CARBON(S);68OHM,5%,1/2W,AA,TP,2.4X6.4MM	
R152	2001-000221	R-CARBON;1.2KOHM,5%,1/8W,AA,TP,1.8X3.2M	
R280	2001-000241	R-CARBON;1.5KOHM,5%,1/8W,AA,TP,1.8X3.2M	
R231	2001-000241	R-CARBON;1.5KOHM,5%,1/8W,AA,TP,1.8X3.2M	
R229	2001-000258	R-CARBON;1.8KOHM,5%,1/8W,AA,TP,1.8X3.2M	
R228	2001-000258	R-CARBON;1.8KOHM,5%,1/8W,AA,TP,1.8X3.2M	
R235	2001-000273	R-CARBON;100KOHM,5%,1/8W,AA,TP,1.8X3.2M	
R933	2001-000281	R-CARBON;100OHM,5%,1/8W,AA,TP,1.8X3.2MM	
R155	2001-000281	R-CARBON;100OHM,5%,1/8W,AA,TP,1.8X3.2MM	
R211	2001-000281	R-CARBON;100OHM,5%,1/8W,AA,TP,1.8X3.2MM	
R212	2001-000281	R-CARBON;100OHM,5%,1/8W,AA,TP,1.8X3.2MM	
R507	2001-000281	R-CARBON;100OHM,5%,1/8W,AA,TP,1.8X3.2MM	
R508	2001-000281	R-CARBON;100OHM,5%,1/8W,AA,TP,1.8X3.2MM	
R509	2001-000281	R-CARBON;100OHM,5%,1/8W,AA,TP,1.8X3.2MM	
R903	2001-000281	R-CARBON;100OHM,5%,1/8W,AA,TP,1.8X3.2MM	
R916	2001-000281	R-CARBON;100OHM,5%,1/8W,AA,TP,1.8X3.2MM	
R917	2001-000281	R-CARBON;100OHM,5%,1/8W,AA,TP,1.8X3.2MM	
R906	2001-000281	R-CARBON;100OHM,5%,1/8W,AA,TP,1.8X3.2MM	
R907	2001-000281	R-CARBON;100OHM,5%,1/8W,AA,TP,1.8X3.2MM	
R932A	2001-000290	R-CARBON;10KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
R936	2001-000290	R-CARBON;10KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
R232	2001-000290	R-CARBON;10KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
R233	2001-000290	R-CARBON;10KOHM,5%,1/8W,AA,TP,1.8X3.2MM	

Loc. No.	Code No.	Description ; Specification	Remark
R237	2001-000290	R-CARBON;10KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
R238	2001-000290	R-CARBON;10KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
R910	2001-000290	R-CARBON;10KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
R921	2001-000290	R-CARBON;10KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
R922	2001-000290	R-CARBON;10KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
R923	2001-000290	R-CARBON;10KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
R927	2001-000290	R-CARBON;10KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
R928	2001-000290	R-CARBON;10KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
R932	2001-000290	R-CARBON;10KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
R905	2001-000397	R-CARBON;180KOHM,5%,1/8W,AA,TP,1.8X3.2M	
RX02	2001-000411	R-CARBON;18KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
R931	2001-000429	R-CARBON;1KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
R103	2001-000429	R-CARBON;1KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
R201	2001-000429	R-CARBON;1KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
R611	2001-000429	R-CARBON;1KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
R826	2001-000429	R-CARBON;1KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
R902	2001-000429	R-CARBON;1KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
R934	2001-000449	R-CARBON;2.2KOHM,5%,1/8W,AA,TP,1.8X3.2M	
R908	2001-000449	R-CARBON;2.2KOHM,5%,1/8W,AA,TP,1.8X3.2M	
R924	2001-000449	R-CARBON;2.2KOHM,5%,1/8W,AA,TP,1.8X3.2M	
R925	2001-000449	R-CARBON;2.2KOHM,5%,1/8W,AA,TP,1.8X3.2M	
R935	2001-000472	R-CARBON;2.7KOHM,5%,1/8W,AA,TP,1.8X3.2M	
R218	2001-000472	R-CARBON;2.7KOHM,5%,1/8W,AA,TP,1.8X3.2M	
R227	2001-000508	R-CARBON;220KOHM,5%,1/8W,AA,TP,1.8X3.2M	
R402	2001-000515	R-CARBON;220OHM,5%,1/8W,AA,TP,1.8X3.2MM	
R208	2001-000515	R-CARBON;220OHM,5%,1/8W,AA,TP,1.8X3.2MM	
R209	2001-000515	R-CARBON;220OHM,5%,1/8W,AA,TP,1.8X3.2MM	
R210	2001-000515	R-CARBON;220OHM,5%,1/8W,AA,TP,1.8X3.2MM	
R221	2001-000515	R-CARBON;220OHM,5%,1/8W,AA,TP,1.8X3.2MM	
RX05	2001-000522	R-CARBON;22KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
R920	2001-000522	R-CARBON;22KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
R236	2001-000548	R-CARBON;270KOHM,5%,1/8W,AA,TP,1.8X3.2M	
R307	2001-000563	R-CARBON;27KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
R510	2001-000568	R-CARBON;27OHM,5%,1/8W,AA,TP,1.8X3.2MM	
R511	2001-000568	R-CARBON;27OHM,5%,1/8W,AA,TP,1.8X3.2MM	
R512	2001-000568	R-CARBON;27OHM,5%,1/8W,AA,TP,1.8X3.2MM	
R610	2001-000577	R-CARBON;2KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
R240	2001-000577	R-CARBON;2KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
R253	2001-000591	R-CARBON;3.3KOHM,5%,1/8W,AA,TP,1.8X3.2M	
R230	2001-000591	R-CARBON;3.3KOHM,5%,1/8W,AA,TP,1.8X3.2M	
R251	2001-000591	R-CARBON;3.3KOHM,5%,1/8W,AA,TP,1.8X3.2M	
R252	2001-000591	R-CARBON;3.3KOHM,5%,1/8W,AA,TP,1.8X3.2M	
R612	2001-000605	R-CARBON;3.6KOHM,5%,1/8W,AA,TP,1.8X3.2M	
R308	2001-000633	R-CARBON;30KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
R305	2001-000660	R-CARBON;33KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
R219	2001-000674	R-CARBON;360OHM,5%,1/8W,AA,TP,1.8X3.2MM	
R217	2001-000702	R-CARBON;39KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
R912	2001-000723	R-CARBON;4.3KOHM,5%,1/8W,AA,TP,1.8X3.2M	
R913	2001-000723	R-CARBON;4.3KOHM,5%,1/8W,AA,TP,1.8X3.2M	
R914	2001-000723	R-CARBON;4.3KOHM,5%,1/8W,AA,TP,1.8X3.2M	
R909	2001-000734	R-CARBON;4.7KOHM,5%,1/8W,AA,TP,1.8X3.2M	
R153	2001-000734	R-CARBON;4.7KOHM,5%,1/8W,AA,TP,1.8X3.2M	
R202	2001-000734	R-CARBON;4.7KOHM,5%,1/8W,AA,TP,1.8X3.2M	
R203	2001-000734	R-CARBON;4.7KOHM,5%,1/8W,AA,TP,1.8X3.2M	
R244	2001-000734	R-CARBON;4.7KOHM,5%,1/8W,AA,TP,1.8X3.2M	
R926	2001-000773	R-CARBON;470KOHM,5%,1/8W,AA,TP,1.8X3.2M	
R226	2001-000773	R-CARBON;470KOHM,5%,1/8W,AA,TP,1.8X3.2M	
R911	2001-000780	R-CARBON;470OHM,5%,1/8W,AA,TP,1.8X3.2MM	
R154	2001-000780	R-CARBON;470OHM,5%,1/8W,AA,TP,1.8X3.2MM	
R223	2001-000780	R-CARBON;470OHM,5%,1/8W,AA,TP,1.8X3.2MM	
R246	2001-000780	R-CARBON;470OHM,5%,1/8W,AA,TP,1.8X3.2MM	
R401	2001-000780	R-CARBON;470OHM,5%,1/8W,AA,TP,1.8X3.2MM	
RX01	2001-000786	R-CARBON;47KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
R156	2001-000793	R-CARBON;47OHM,5%,1/8W,AA,TP,1.8X3.2MM	
R101	2001-000812	R-CARBON;5.6KOHM,5%,1/8W,AA,TP,1.8X3.2M	
R247	2001-000832	R-CARBON;510OHM,5%,1/8W,AA,TP,1.8X3.2MM	
RX08	2001-000837	R-CARBON;51KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
R213	2001-000837	R-CARBON;51KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
R303	2001-000864	R-CARBON;56KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
R915	2001-000869	R-CARBON;56OHM,5%,1/8W,AA,TP,1.8X3.2MM	
R901	2001-000890	R-CARBON;6.8KOHM,5%,1/8W,AA,TP,1.8X3.2M	
R204	2001-000904	R-CARBON;620OHM,5%,1/8W,AA,TP,1.8X3.2MM	
R205	2001-000904	R-CARBON;620OHM,5%,1/8W,AA,TP,1.8X3.2MM	
R206	2001-000904	R-CARBON;620OHM,5%,1/8W,AA,TP,1.8X3.2MM	
R239	2001-000947	R-CARBON;7.5KOHM,5%,1/8W,AA,TP,1.8X3.2M	
R216	2001-000969	R-CARBON;75OHM,5%,1/8W,AA,TP,1.8X3.2MM	
R222	2001-000989	R-CARBON;820KOHM,5%,1/8W,AA,TP,1.8X3.2M	
R241	2001-000995	R-CARBON;820OHM,5%,1/8W,AA,TP,1.8X3.2MM	
R242	2001-000995	R-CARBON;820OHM,5%,1/8W,AA,TP,1.8X3.2MM	
R602	2001-000995	R-CARBON;820OHM,5%,1/8W,AA,TP,1.8X3.2MM	
R306	2001-001000	R-CARBON;82KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
R102	2001-001000	R-CARBON;82KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
R413	2001-001037	R-CARBON(S);0.39OHM,5%,1/2W,AA,TP,2.4X6.4M	
R816	2001-001054	R-CARBON(S);1.6KOHM,5%,1/2W,AA,TP,2.4X6.4M	
R904	2001-001062	R-CARBON(S);10MOHM,5%,1/2W,AA,TP,2.4X6.4MM	
R214	2001-001071	R-CARBON(S);12KOHM,5%,1/2W,AA,TP,2.4X6.4MM	
R813	2001-001078	R-CARBON(S);15KOHM,5%,1/2W,AA,TP,2.4X6.4MM	
R812	2001-001078	R-CARBON(S);15KOHM,5%,1/2W,AA,TP,2.4X6.4MM	
R825	2001-001088	R-CARBON(S);1KOHM,5%,1/2W,AA,TP,2.4X6.4MM	
R207	2001-001111	R-CARBON(S);240OHM,5%,1/2W,AA,TP,2.4X6.4MM	
R403	2001-001114	R-CARBON(S);270OHM,5%,1/2W,AA,TP,2.4X6.4MM	
R304	2001-001120	R-CARBON(S);3.3OHM,5%,1/2W,AA,TP,2.4X6.4MM	
R822	2001-001125	R-CARBON(S);300KOHM,5%,1/2W,AA,TP,2.4X6.4M	
R810	2001-001134	R-CARBON(S);360ohm,5%,1/2W,AA,TP,2.4x6.4mm	
R827	2001-001134	R-CARBON(S);360ohm,5%,1/2W,AA,TP,2.4x6.4mm	
R829	2001-001134	R-CARBON(S);360ohm,5%,1/2W,AA,TP,2.4x6.4mm	
R830	2001-001139	R-CARBON(S);39KOHM,5%,1/2W,AA,TP,2.4X6.4MM	
R807	2001-001163	R-CARBON(S);560OHM,5%,1/2W,AA,TP,2.4X6.4MM	
R814	2001-001178	R-CARBON(S);680OHM,5%,1/2W,AA,TP,2.4X6.4MM	
R808	2001-001178	R-CARBON(S);680OHM,5%,1/2W,AA,TP,2.4X6.4MM	
R515	2002-001006	R-COMPOSITION;4.7Kohm,5%,1/2W,AA,TP,3.7x9mm	
RM01	2002-001006	R-COMPOSITION;4.7Kohm,5%,1/2W,AA,TP,3.7x9mm	
RM02	2002-001006	R-COMPOSITION;4.7Kohm,5%,1/2W,AA,TP,3.7x9mm	
R801	2002-001010	R-COMPOSITION;1.8Mohm,5%,1/2W,AA,TP,3.7x9mm	
R811	2002-001013	R-COMPOSITION;4.7Mohm,5%,1/2W,AA,TP,3.7x9mm	
R820	2003-000490	R-METAL OXIDE(S);12ohm,5%,2W,AA,TP,4x12mm	
R405	2003-000540	R-METAL OXIDE(S);1Kohm,5%,2W,AF,TP,4x12mm	
R506	2003-000784	R-METAL OXIDE(S);7.5Kohm,5%,2W,AF,TP,4x12mm	
R506A	2003-000784	R-METAL OXIDE(S);7.5Kohm,5%,2W,AF,TP,4x12mm	
R415	2003-000784	R-METAL OXIDE(S);7.5Kohm,5%,2W,AF,TP,4x12mm	
R504	2003-000784	R-METAL OXIDE(S);7.5Kohm,5%,2W,AF,TP,4x12mm	
R504A	2003-000784	R-METAL OXIDE(S);7.5Kohm,5%,2W,AF,TP,4x12mm	
R505	2003-000784	R-METAL OXIDE(S);7.5Kohm,5%,2W,AF,TP,4x12mm	
R505A	2003-000784	R-METAL OXIDE(S);7.5Kohm,5%,2W,AF,TP,4x12mm	
R805	2003-000994	R-METAL OXIDE(S);33Kohm,5%,2W,AF,TP,3.9x10mm	
R804	2003-000994	R-METAL OXIDE(S);33Kohm,5%,2W,AF,TP,3.9x10mm	
R104	2003-001037	R-METAL OXIDE(S);39ohm,5%,2W,AF,TP,3.9x10mm	
R406	2003-002071	R-METAL OXIDE;560ohm,5%,2W,AF,TP,3.9x10mm	
R929	2004-001089	R-METAL;560Kohm,5%,1/8W,AA,TP,1.8x3.2m	
RX04	2004-001376	R-METAL(S);11Kohm,1%,1/2W,AA,TP,2.4x6.4mm	
R411	2004-001389	R-METAL(S);196Kohm,1%,1/2W,AA,TP,2.4x6.4m	
R408	2004-001390	R-METAL(S);1Kohm,2%,1/2W,AA,TP,2.4x6.4mm	
R215	2004-001402	R-METAL(S);6.8Kohm,1%,1/2W,AA,TP,2.4x6.4m	
R854	2004-001983	R-METAL(S);2.49Kohm,1%,1/2W,AA,TP,2.4x6.4	
RX03	2004-001987	R-METAL(S);4.3Kohm,1%,1/2W,AA,TP,2.4x6.4m	
R815	2004-004089	R-METAL(S);123Kohm,1%,1/2W,AA,TP,2.5x6.5m	
R410	2008-000206	R-FUSIBLE(S);1ohm,5%,1/2W,AF,TP,2.5x6.5mm	
R409	2008-000253	R-FUSIBLE(S);0.47ohm,5%,1W,AF,TP,3.9x10mm	
R257	2008-000266	R-FUSIBLE(S);1ohm,5%,2W,AF,TP,3.9x10mm	
R518	2008-001013	R-FUSIBLE(S);1.2ohm,5%,2W,AF,TP,3.9x10mm	
R407	2008-001069	R-FUSIBLE(S);300ohm,5%,2W,AA,TP,3.9x10mm	
C213	2201-000193	C-CERAMIC,DISC;10pF,0.3pF,50V,CH,TP,5x3,5	
C910	2201-000257	C-CERAMIC,DISC;16pF,5%,50V,CH,TP,5x3,5	
C819	2201-000374	C-CERAMIC,DISC;220pF,5%,50V,CH,TP,12.5x3,5	
C444	2201-000441	C-CERAMIC,DISC;3.3nF,10%,500V,Y5P,TP,10x4,5	
C403	2201-000467	C-CERAMIC,DISC;330pF,10%,2KV,Y5P,TP,8x6,7.5	
C906	2201-000483	C-CERAMIC,DISC;33pF,5%,50V,CH,TP,5x3,5	
C820	2201-000556	C-CERAMIC,DISC;470pF,10%,500V,Y5P,TP,7x4,5	
C302	2201-000556	C-CERAMIC,DISC;470pF,10%,500V,Y5P,TP,7x4,5	
C406	2201-000556	C-CERAMIC,DISC;470pF,10%,500V,Y5P,TP,7x4,5	
C408	2201-000556	C-CERAMIC,DISC;470pF,10%,500V,Y5P,TP,7x4,5	
C411	2201-000556	C-CERAMIC,DISC;470pF,10%,500V,Y5P,TP,7x4,5	
C813	2201-000599	C-CERAMIC,DISC;560pF,10%,500V,Y5P,TP,7x4,5	
C908	2201-000961	C-CERAMIC,DISC;10pF,0.5pF,50V,RH,TP,5x3mm,5mm	
C303	2201-000982	C-CERAMIC,DISC;10nF,+80-20%,50V,Y5V,TP,6.5x3,	
C810	2201-000987	C-CERAMIC,DISC;2.2nF,20%,400V,Y5U,TP,15x8,10	
C803	2201-000987	C-CERAMIC,DISC;2.2nF,20%,400V,Y5U,TP,15x8,10	
C812	2201-000991	C-CERAMIC,DISC;560pF,10%,2KV,Y5P,TP,13x7,7.5	
C505	2201-002063	C-CERAMIC,DISC;10nF,+80-20%,3KV,Y5V,TP,16x5,7	
C229	2202-000127	C-CERAMIC,MLC-AXIAL;10nF,+80-20%,25V,Y5V,TP,-,7.5	
CX01	2202-000127	C-CERAMIC,MLC-AXIAL;10nF,+80-20%,25V,Y5V,TP,-,7.5	
C101	2202-000127	C-CERAMIC,MLC-AXIAL;10nF,+80-20%,25V,Y5V,TP,-,7.5	
C104	2202-000127	C-CERAMIC,MLC-AXIAL;10nF,+80-20%,25V,Y5V,TP,-,7.5	
C151	2202-000127	C-CERAMIC,MLC-AXIAL;10nF,+80-20%,25V,Y5V,TP,-,7.5	

Loc. No.	Code No.	Description ; Specification	Remark
C153	2202-000127	C-CERAMIC,MLC-AXIAL;10nF,+80-20%,25V,Y5V,TP,-,7.5	
C212	2202-000127	C-CERAMIC,MLC-AXIAL;10nF,+80-20%,25V,Y5V,TP,-,7.5	
C913	2202-000164	C-CERAMIC,MLC-AXIAL;.18NF,10%,50V,Y5P,TP,3.5X1.9MM	
C216	2202-000205	C-CERAMIC,MLC-AXIAL;22pF,5%,50V,SL,TP,1.9x3.5,-	
C916	2202-000210	C-CERAMIC,MLC-AXIAL;270pF,10%,50V,Y5P,TP,1.9x3.5,7	
C502	2202-000231	C-CERAMIC,MLC-AXIAL;330pF,10%,50V,Y5P,TP,3.5x19,-	
C501	2202-000231	C-CERAMIC,MLC-AXIAL;330pF,10%,50V,Y5P,TP,3.5x19,-	
C503	2202-000263	C-CERAMIC,MLC-AXIAL;470pF,10%,50V,Y5P,TP,3.5x19,-	
C612	2202-000279	C-CERAMIC,MLC-AXIAL;47pF,5%,50V,SL,TP,3.5x19,-	
C611	2202-000279	C-CERAMIC,MLC-AXIAL;47pF,5%,50V,SL,TP,3.5x19,-	
C201	2202-000796	C-CERAMIC,MLC-AXIAL;1NF,10%,50V,Y5P,TP,3.5X1.9MM,-	
C217	2202-000796	C-CERAMIC,MLC-AXIAL;1NF,10%,50V,Y5P,TP,3.5X1.9MM,-	
C902	2202-000796	C-CERAMIC,MLC-AXIAL;1NF,10%,50V,Y5P,TP,3.5X1.9MM,-	
C206	2202-000807	C-CERAMIC,MLC-AXIAL;22nF,+80-20%,25V,Y5V,TP,3.5x19	
C915	2202-002037	C-CERAMIC,MLC-AXIAL;100nF,80-20%,50V,Y5V,TP,2.2x3.	
C209	2202-002037	C-CERAMIC,MLC-AXIAL;100nF,80-20%,50V,Y5V,TP,2.2x3.	
C210	2202-002037	C-CERAMIC,MLC-AXIAL;100nF,80-20%,50V,Y5V,TP,2.2x3.	
C211	2202-002037	C-CERAMIC,MLC-AXIAL;100nF,80-20%,50V,Y5V,TP,2.2x3.	
C222	2202-002037	C-CERAMIC,MLC-AXIAL;100nF,80-20%,50V,Y5V,TP,2.2x3.	
C227	2202-002037	C-CERAMIC,MLC-AXIAL;100nF,80-20%,50V,Y5V,TP,2.2x3.	
C238	2202-002037	C-CERAMIC,MLC-AXIAL;100nF,80-20%,50V,Y5V,TP,2.2x3.	
C239	2202-002037	C-CERAMIC,MLC-AXIAL;100nF,80-20%,50V,Y5V,TP,2.2x3.	
C301	2301-000016	C-FILM,PEF;22nF,5%,100V,TP,7.2x4.5x9.0mm,	
C401	2301-000016	C-FILM,PEF;22nF,5%,100V,TP,7.2x4.5x9.0mm,	
C809	2301-000016	C-FILM,PEF;22nF,5%,100V,TP,7.2x4.5x9.0mm,	
C818	2301-000192	C-FILM,PEF;1nF,5%,50V,TP,5.3x10mm,5mm	
C602	2301-000224	C-FILM,PEF;22nF,5%,50V,TP,7.4x3.9x13mm,5m	
C234	2301-000232	C-FILM,PEF;3.3nF,5%,50V,TP,8.1x4.5x13mm,5	
C806	2301-000310	C-FILM,PEF;68nF,5%,50V,TP,8.0X8.5X4.0X5,5	
C308	2301-000310	C-FILM,PEF;68nF,5%,50V,TP,8.0X8.5X4.0X5,5	
C237	2301-000383	C-FILM,PEF;10nF,5%,50V,TP,6x7x3.2mm,5mm	
C218	2301-000395	C-FILM,PEF;18nF,5%,50V,TP,6.5x12.5x3.5mm,	
	2301-000519	C-FILM,PEF;3.3nF,5%,100V,TP,5.8x3x12.5,5m	
C805	2303-000163	C-FILM,PPF;2.2nF,5%,800V,TP,15x13x8.5,7.5	
C305	2305-000427	C-FILM,MPEF;47nF,5%,100V,TP,7.5x12.5x3.5,5	
C313	2305-000470	C-FILM,MPEF;68nF,5%,100V,TP,-,5mm	
C807	2305-000665	C-FILM,MPEF;100nF,5%,63V,TP,7.5x4.0x5.0mm,	
C825	2305-000665	C-FILM,MPEF;100nF,5%,63V,TP,7.5x4.0x5.0mm,	
C827	2305-000665	C-FILM,MPEF;100nF,5%,63V,TP,7.5x4.0x5.0mm,	
C405	2305-000704	C-FILM,MPEF;100nF,5%,250V,TP,16.5x10.3x5.7	
C912	2305-001011	C-FILM,MPEF;22nF,5%,100V,TP,3.5x12.5x7.5mm	
C901	2306-000122	C-FILM,MPPF;100nF,5%,50V,TP,7.3x4.0x5.0mm,	
C230	2306-000122	C-FILM,MPPF;100nF,5%,50V,TP,7.3x4.0x5.0mm,	
C404	2306-000193	C-FILM,MPPF;360nF,5%,200V,TP,21x18.5x13,7.	
C801	2306-000318	C-FILM,MPPF;220nF,20%,250V,TP,-,22.5mm	
C402	2306-000326	C-FILM,MPPF;4.7nF,5%,1.6KV,TP,28.5x16x9mm,	
C306	2401-000173	C-AL;1000uF,20%,35V,GP,TP,13x25,5	
C814	2401-000262	C-AL;100uF,20%,160V,HR,TP,16x25,7.5	
C826	2401-000302	C-AL;100uF,20%,25V,GP,TP,6.3x11,5	
C309	2401-000360	C-AL;100uF,20%,50V,GP,TP,8x11.5,5	
C204	2401-000480	C-AL;10uF,20%,50V,GP,TP,5x11,5	
C208	2401-000480	C-AL;10uF,20%,50V,GP,TP,5x11,5	
C224	2401-000480	C-AL;10uF,20%,50V,GP,TP,5x11,5	
C225	2401-000480	C-AL;10uF,20%,50V,GP,TP,5x11,5	
C604	2401-000480	C-AL;10uF,20%,50V,GP,TP,5x11,5	
C824	2401-000480	C-AL;10uF,20%,50V,GP,TP,5x11,5	
C914	2401-000480	C-AL;10uF,20%,50V,GP,TP,5x11,5	
CX02	2401-000480	C-AL;10uF,20%,50V,GP,TP,5x11,5	
CX03	2401-000480	C-AL;10uF,20%,50V,GP,TP,5x11,5	
C108	2401-000480	C-AL;10uF,20%,50V,GP,TP,5x11,5	
C150	2401-000480	C-AL;10uF,20%,50V,GP,TP,5x11,5	
C152	2401-000480	C-AL;10uF,20%,50V,GP,TP,5x11,5	
C310	2401-000493	C-AL;10uF,20%,50V,LZ,TP,5x11mm,5mm	
C304	2401-000553	C-AL;1uF,10%,50V,GP,TP,5x11,5	
C413	2401-000560	C-AL;1uF,20%,160V,GP,TP,6.3x11,5	
C220	2401-000603	C-AL;1uF,20%,50V,GP,TP,5x11,5	
C221	2401-000603	C-AL;1uF,20%,50V,GP,TP,5x11,5	
C226	2401-000603	C-AL;1uF,20%,50V,GP,TP,5x11,5	
C233	2401-000647	C-AL;2.2uF,20%,50V,BP,TP,5x11,5	
C102	2401-000660	C-AL;2.2uF,20%,50V,GP,TP,5x11,5	
C214	2401-000660	C-AL;2.2uF,20%,50V,GP,TP,5x11,5	
C603	2401-000660	C-AL;2.2uF,20%,50V,GP,TP,5x11,5	
C409	2401-000832	C-AL;220uF,20%,25V,GP,TP,8x11.5,5	
C907	2401-000962	C-AL;22uF,20%,50V,GP,TP,5x11,5	
C311	2401-001333	C-AL;470nF,20%,50V,GP,TP,5x11,5	
C202	2401-001333	C-AL;470nF,20%,50V,GP,TP,5x11,5	
C205	2401-001333	C-AL;470nF,20%,50V,GP,TP,5x11,5	
C207	2401-001333	C-AL;470nF,20%,50V,GP,TP,5x11,5	
C822	2401-001363	C-AL;470uF,20%,16V,GP,TP,10x12.5,5	
C823	2401-001363	C-AL;470uF,20%,16V,GP,TP,10x12.5,5	
C903	2401-001363	C-AL;470uF,20%,16V,GP,TP,10x12.5,5	
C240	2401-001363	C-AL;470uF,20%,16V,GP,TP,10x12.5,5	
C241	2401-001363	C-AL;470uF,20%,16V,GP,TP,10x12.5,5	
C605	2401-001363	C-AL;470uF,20%,16V,GP,TP,10x12.5,5	
C609	2401-001397	C-AL;470uF,20%,25V,GP,TP,10x16,5	
C407	2401-001415	C-AL;470uF,20%,35V,GP,TP,10x20,5	
C815	2401-001488	C-AL;47uF,20%,160V,WT,TP,13x20,5	
C808	2401-001571	C-AL;47uF,+20%-0%,50V,GP,TP,8x11.5,	
C219	2401-001625	C-AL;6.8uF,20%,50V,GP,TP,5x11,5	
C817	2401-001998	C-AL;1000uF,20%,25V,GP,TP,10x20,5mm	
C232	2401-002144	C-AL;47uF,20%,16V,GP,TP,5x11,5	
C816	2401-002215	C-AL;2200uF,20%,25V,WT,TP,13x25,5	
C821	2401-002286	C-AL;470uF,20%,16V,WT,TP,10x12.5,5	
C909	2401-002594	C-AL;220uF,20%,16V,GP,TP,8x11.5,5	
C601	2401-002619	C-AL;47uF,20%,25V,GP,TP,5x11,5	
C203	2401-002619	C-AL;47uF,20%,25V,GP,TP,5x11,5	
C215	2401-002619	C-AL;47uF,20%,25V,GP,TP,5x11,5	
C410	2401-002619	C-AL;47uF,20%,25V,GP,TP,5x11,5	
C804	2401-003024	C-AL;220uF,20%,200V,WT,TP,22x35,10	
C109	2401-003102	C-AL;100uF,20%,10V,GP,TP,5x11,5	
C412	2401-003114	C-AL;4.7uF,20%,250V,WT,TP,10x16,5	
C312	2401-003561	C-AL;1uF,10%,50V,GP,TP,5x11mm,5	
L206	2701-000111	INDUCTOR-AXIAL;100uH,10%,2.5x3.4mm	
J194	2701-000111	INDUCTOR-AXIAL;100uH,10%,2.5x3.4mm	
L807	2701-000114	INDUCTOR-AXIAL;10uH,10%,2.5x3.4mm	
L150	2701-000114	INDUCTOR-AXIAL;10uH,10%,2.5x3.4mm	
L301	2701-000116	INDUCTOR-AXIAL;10uH,10%,4.2x9.8mm	
L203	2701-000158	INDUCTOR-AXIAL;22uH,10%,2.5x3.4mm	
L602	2701-000158	INDUCTOR-AXIAL;22uH,10%,2.5x3.4mm	
L152	2701-000202	INDUCTOR-AXIAL;560nH,10%,2.5x3.4mm	
L202	2701-000207	INDUCTOR-AXIAL;56uH,5%,2.5x3.4mm	
L204	2701-000207	INDUCTOR-AXIAL;56uH,5%,2.5x3.4mm	
L810	2701-000207	INDUCTOR-AXIAL;56uH,5%,2.5x3.4mm	
L806	2701-001032	INDUCTOR-AXIAL;100UH,10%,5X14MM	
L402	2701-001032	INDUCTOR-AXIAL;100UH,10%,5X14MM	
X201	2801-000226	CRYSTAL-UNIT;3.579545MHz,20ppm,28-AAM,15pF,	
X901	2801-003224	CRYSTAL-UNIT;32.768KHz,20ppm,28-AAY,12.5pF,	
X202	2802-000172	RESONATOR-CERAMIC;503.5KHz,0.5%,BK,7.0x3.5x9.0mm	
L809	2901-000297	FILTER-EMI ON BOARD;-,3A,-,-,3.5x5,TP,-	
L403	2901-000297	FILTER-EMI ON BOARD;-,3A,-,-,3.5x5,TP,-	
L811	2901-000299	FILTER-EMI ON BOARD;-,6A,UL/CSA,-,9x7.5,TP,-	
Z601	2903-000135	FILTER-CERAMIC;BP,4.5MHz,+-60KHz,6dB,-,TP,-	
Z201	2903-001022	FILTER-CERAMIC;TR,4.5MHz,-,0.5dB,-,TP,-	
SF101	2904-000304	FILTER-SAW AV;45.75MHz,-,ST,13.2dB,NTSC-USA,	
L207	3301-000287	CORE-FERRITE BEAD;AA,3.5x1.0x6.0mm,1500,2400G	
L804	3301-000287	CORE-FERRITE BEAD;AA,3.5x1.0x6.0mm,1500,2400G	
L808	3301-000287	CORE-FERRITE BEAD;AA,3.5x1.0x6.0mm,1500,2400G	
L802	3301-001223	CORE-FERRITE BEAD;AB,-,3.5X5X0.8MM,-,TP,HF30,-	
L803	3301-001223	CORE-FERRITE BEAD;AB,-,3.5X5X0.8MM,-,TP,HF30,-	
L812	3301-001223	CORE-FERRITE BEAD;AB,-,3.5X5X0.8MM,-,TP,HF30,-	
RLU01	3501-001040	RELAY-POWER;12VDC,500mW,10A,1FormA,15mS,5m	
F801	3601-000144	FUSE-FERRULE;125V,4A,SB,GLASS,5.2x20mm	
F801B	3602-000114	FUSE-HOLDER;-,-,30mohm	
F801A	3602-000114	FUSE-HOLDER;-,-,30mohm	
V999	3704-000103	SOCKET-CRT;10P,22.5,14.3,SN,ISMS01S/BK	
CN601	3711-002642	CONNECTOR-HEADER;BOX,3P,1R,2.5mm,STRAIGHT,SN	
CN602	3711-002645	CONNECTOR-HEADER;BOX,6P,1R,2.5mm,STRAIGHT,SN	
CN902	3711-003641	CONNECTOR-HEADER;BOX,12P,1R,2.5mm,STRAIGHT,SN	
CN201	3711-003641	CONNECTOR-HEADER;BOX,12P,1R,2.5mm,STRAIGHT,SN	

ASSY CABINET(COM)

*	AA90-00338A	ASSY CABINET(COM);-,CMC13003X/KMT
CRT+CF	AA60-10050R	SCREW-ASSY;WC,HH,+,M5,L31.5,SWRCH18A,ZPC(
	AA64-30356A	CABINET-BACK;-,T3350,-,HIPS,V0,BLK,-,-
	AA65-30008A	CLAMP-CORD;PE,HB,BLK,-,-,-
	AA65-30016A	CLAMP-D,COIL;NYLON-66,V0,NTR,DADH-360 14',-
CB+CF	6002-000514	SCREW-TAPPING;RH,+,2,M4,L15,ZPC(BLK),SWRCH18
AVPCB	6003-000333	SCREW-TAPTITE;RH,+,2S,M3,L10,ZPC(YEL),SWRCH1

Loc. No.	Code No.	Description ; Specification	Remark
		ASSY CABINET FRONT	
*	AA90-00339A	ASSY CABINET FRONT;-,CMC13003X/KMT	
KNF+CF	AA60-10008A	SCREW-TAPPING;TH,+,M3,L10,ZPC(YEL),SWRCH18A,	
	AA61-40015A	BOSS-CABINET;-,HIPS,HB,NTR,-,-	
	AA64-01229A	WINDOW REMOCON;DP,T3350,-,-,-,-,-,-,AA64-4002	
	AA64-10001K	KNOB-FAMILY;T3350,ABS,-,BLK,BK708P NO-SILK	
	AA64-30093W	CABINET FRONT;T3350,BK708P K-MARK,HIPS,V0,BL	
	AA64-40160A	INDICATOR-LED;-,T3350,-,PC,-,-,-	
		ASSY CHASSIS PART	
*	AA90-00340A	ASSY CHASSIS PART;-,CMC13003X/KMT	
PCB+HC	AA60-10008A	SCREW-TAPPING;TH,+,M3,L10,ZPC(YEL),SWRCH18A,	
	AA61-20231B	HOLDER-CHASSIS;DP,T3350,-,-,-,AA61-20016A	
	AA63-00308A	SHIELD-PCB;DP,T3350,-,-,AA63-00075A(6KG)	
SHP	6002-000511	SCREW-TAPPING;RH,+,2,M3,L8,ZPC(YEL),SWRCH18A	
		ASSY M/DECK	
*	AA94-02428A	ASSY M/DECK;M-S20N/TTS,CMC13003,2HD,NTSC,T	
	AA90-00332A	ASSY FRAME;CMC13003X/KMT,-	
	AA61-00008C	FRAME-DECK;TVCR,-,-,-,-,-,AA61-00004B	
	AA61-00050A	SPRING-DOOR;-,SUS304,-,-,-,-,0.5,OD6,H9.7,	
	AA63-00007A	SHIELD-BOTTOM;DP,SPTE,-,AA63-40313A,TVN-502V	
	AA63-00179A	COVER-FRAME TOP ASSY;DP,TVCR NT SAMEX,AA63-00150A,S	
	AA63-00149B	COVER-FRAME,TOP;-,TVCR,SEC NT(SAMEX),SECC,-,-,	
	AA63-40301A	SHIELD-PLATE;-,S30,T0.5,-,TF531	
	AA63-60001L	SPACER-FELT;FELT,T0.35,BLK,150X15,-,-	
	AA64-00032J	DOOR-HOUSING;DP,T3350 K-MART,-,-,-,-,-,AA64	
DE+FD	6002-000522	SCREW-TAPPING;TH,+,2,M4,L15,ZPC(BLK),SWRCH18	
CFT+FD	6003-001022	SCREW-TAPTITE;RH,+,B,M3,L12,ZPC(BLK),SWRCH18	
FD+PCB	6003-001022	SCREW-TAPTITE;RH,+,B,M3,L12,ZPC(BLK),SWRCH18	
	AA91-00282A	ASSY DECK;-,NTSC,2HD,SVTW-M2N/TTS	
	AA95-00540A	ASSY-PCB,M/DECK;-,2HD,V15A,NTSC,TWIN,-,-	
⚠ ICM601	AA09-00048A	IC-MCU;UPD748927GF-161-3BA,-,ST,-,100	
FLM501	AA26-10006C	TRANS-IF;-,7MF,BIAS,2.4MH,7MM,-,65.3KHZ	
SWM601	AA34-20001A	SWITCH-MODE;1,25x14.6x29.8mm,BK,DC5V	
SWM602	AA34-40001A	SWITCH-REC.;1EA,37.5x14.4mm,BK,DC5V	
CNM605	AA39-20071D	LEAD-CONNECTOR,ASSY;-,YBNH025-12,67096-012,12P,300	
CNM001	AA39-20159D	LEAD CONNECTOR-ASSY;-,YBNH025-12,67096-12,12P,300m	
CNM601	AA39-20603A	LEAD CONNECTOR-ASSY;-,GIL-S-2S-S2C2-S,YBH200-02,2P	
PCB	AA41-00169A	PCB-M/DECK;V15A,1L,FR-1,330X245X1.6T,1A,-	
REM701	AA59-60003V	MODULE-REMOCON;-,SRV-18,38KHZ,940NM,MESH,V,ST	
GPM001	AA63-40311A	GROUND-PLATE,PCB;-,PBS,T0.3,TVN334V,-	
LDM601	AA91-60317A	ASSY-GUIDE,LED;-,ABS,V0,BLK,RED LED 03,TS-DEC	
	AA61-00006A	GUIDE-LED;TVCR ,ABS,V0,BLK,-,-,-	
	0601-000385	LED;ROUND,RED,3mm,700nm	
LDM602	AA91-60318A	ASSY-HOLDER,LED;-,ABS,HB,BLK,IR LED,TS-DECK	
	AA61-00003A	HOLDER-LED;-,TVN-502V,-,HB,BLK,-	
	0601-001303	LED-IR;SIDE-VIEW,2.5mm,75mW,6V,950nm,	
SM602	AA91-60319A	ASSY-HOLDER,SENSOR;-,ABS,HB,BLK,TR LED,TS-DECK	
	AA61-00005A	HOLDER-SENSOR;-,TVN-502V,-,HB,BLK,-	
	0603-001011	PHOTO-TR;NPN,35V,6V,50mA,75mW,BK	
SM601	AA91-60319A	ASSY-HOLDER,SENSOR;-,ABS,HB,BLK,TR LED,TS-DECK	
	AA61-00005A	HOLDER-SENSOR;-,TVN-502V,-,HB,BLK,-	
	0603-001011	PHOTO-TR;NPN,35V,6V,50mA,75mW,BK	
⚠ ICM101	1203-000298	IC-POSI.FIXED REG.;7809,TO-220,3P,-,PLASTIC,8.65/ H/SINK	
DM608	0401-000005	DIODE-SWITCHING;1N4148,100V,200MA,DO-35,TP	
DM701	0401-000005	DIODE-SWITCHING;1N4148,100V,200MA,DO-35,TP	
DM106	0401-000005	DIODE-SWITCHING;1N4148,100V,200MA,DO-35,TP	
DM110	0401-000005	DIODE-SWITCHING;1N4148,100V,200MA,DO-35,TP	
DM302	0401-000005	DIODE-SWITCHING;1N4148,100V,200MA,DO-35,TP	
DM605	0401-000005	DIODE-SWITCHING;1N4148,100V,200MA,DO-35,TP	
DM606	0401-000005	DIODE-SWITCHING;1N4148,100V,200MA,DO-35,TP	
DM107	0402-000132	DIODE-RECTIFIER;1N4004,400V,1A,DO-41,TP	
DM108	0402-000132	DIODE-RECTIFIER;1N4004,400V,1A,DO-41,TP	
DM109	0402-000132	DIODE-RECTIFIER;1N4004,400V,1A,DO-41,TP	
DM112	0402-000132	DIODE-RECTIFIER;1N4004,400V,1A,DO-41,TP	
DM113	0402-000132	DIODE-RECTIFIER;1N4004,400V,1A,DO-41,TP	
DM114	0402-000132	DIODE-RECTIFIER;1N4004,400V,1A,DO-41,TP	
DM601	0402-000132	DIODE-RECTIFIER;1N4004,400V,1A,DO-41,TP	
DM602	0402-000132	DIODE-RECTIFIER;1N4004,400V,1A,DO-41,TP	
DM603	0402-000132	DIODE-RECTIFIER;1N4004,400V,1A,DO-41,TP	
DM101	0402-000132	DIODE-RECTIFIER;1N4004,400V,1A,DO-41,TP	
DM103	0402-000132	DIODE-RECTIFIER;1N4004,400V,1A,DO-41,TP	
DM104	0402-000132	DIODE-RECTIFIER;1N4004,400V,1A,DO-41,TP	
ZDM701	0403-001211	DIODE-ZENER;MTZJ12B,11.44-12.03,500MW,DO-3	
ZDM101	0403-001324	DIODE-ZENER;MTZJ13A,12.11-12.75V,500mW,DO-	
ZDM102	0403-001373	DIODE-ZENER;MTZJ5.1A,4.81V-5.07V,500mW,D0-	
DM501	0404-000156	DIODE-SCHOTTKY;RB441Q,10V,100mA,DO-34,TP	
QM502	0501-000010	TR-SMALL SIGNAL;KSC1008,NPN,800mW,TO-92,TP,120	
QM503	0501-000303	TR-SMALL SIGNAL;KSA733,PNP,250mW,TO-92,TP,120-	
QM301	0501-000303	TR-SMALL SIGNAL;KSA733,PNP,250mW,TO-92,TP,120-	
QM303	0501-000303	TR-SMALL SIGNAL;KSA733,PNP,250mW,TO-92,TP,120-	
QM501	0501-000303	TR-SMALL SIGNAL;KSA733,PNP,250mW,TO-92,TP,120-	
QM104	0501-000316	TR-SMALL SIGNAL;KSA928A-Y,PNP,1W,TO-92L,-,160-	
QM101	0501-000316	TR-SMALL SIGNAL;KSA928A-Y,PNP,1W,TO-92L,-,160-	
QM107	0501-000362	TR-SMALL SIGNAL;KSA2328A-Y,NPN,1W,TO-92L,TP,16	
QM102	0501-000362	TR-SMALL SIGNAL;KSA2328A-Y,NPN,1W,TO-92L,TP,16	
QM304	0501-000398	TR-SMALL SIGNAL;KSC945,NPN,250mW,TO-92,TP,120-	
QM106	0501-000398	TR-SMALL SIGNAL;KSC945,NPN,250mW,TO-92,TP,120-	
QM505	0501-000442	TR-SMALL SIGNAL;KTC3203-Y,NPN,400mW,T0-92,TP,1	
QM504	0501-000442	TR-SMALL SIGNAL;KTC3203-Y,NPN,400mW,T0-92,TP,1	
QM703	0504-000118	TR-DIGITAL;KSR1003,NPN,300MW,22K/22K,TO-9	
QM103	0504-000118	TR-DIGITAL;KSR1003,NPN,300MW,22K/22K,TO-9	
QM108	0504-000118	TR-DIGITAL;KSR1003,NPN,300MW,22K/22K,TO-9	
QM701	0504-000118	TR-DIGITAL;KSR1003,NPN,300MW,22K/22K,TO-9	
QM702	0504-000118	TR-DIGITAL;KSR1003,NPN,300MW,22K/22K,TO-9	
QM602	0504-000119	TR-DIGITAL;KSR1004,NPN,300MW,47K/47K,TO-9	
QM308	0504-000119	TR-DIGITAL;KSR1004,NPN,300MW,47K/47K,TO-9	
QM309	0504-000119	TR-DIGITAL;KSR1004,NPN,300MW,47K/47K,TO-9	
QM310	0504-000119	TR-DIGITAL;KSR1004,NPN,300MW,47K/47K,TO-9	
QM105	0504-000142	TR-DIGITAL;KSR2001,PNP,300MW,4.7K/4.7K,TO	
QM307	0504-000142	TR-DIGITAL;KSR2001,PNP,300MW,4.7K/4.7K,TO	
QM601	0504-000142	TR-DIGITAL;KSR2001,PNP,300MW,4.7K/4.7K,TO	
PTM602	0604-001122	PHOTO-INTERRUPTER;TR,0.065%,150mW,DIP-4,BK	
PTM601	0604-001122	PHOTO-INTERRUPTER;TR,0.065%,150mW,DIP-4,BK	
⚠ ICM603	1003-001162	IC-MOTOR DRIVER;KA3082,SIP,10PIN,25MIL,DOUBLE,	
⚠ ICM605	1203-000642	IC-RESET;572,TO-92,3P,-,PLASTIC,2.35/2.	
⚠ ICM301	1204-001644	IC-VIDEO PROCESS;LA71069M,QFP,100P,-,PLASTIC,7V	
RM336	2001-000006	R-CARBON;2.4KOHM,5%,1/8W,AA,TP,1.8X3.2M	
RM338	2001-000008	R-CARBON;15KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
RM330	2001-000008	R-CARBON;15KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
RM349	2001-000008	R-CARBON;15KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
RM630	2001-000009	R-CARBON;20KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
RM622	2001-000010	R-CARBON;68KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
RM667	2001-000118	R-CARBON(S);180OHM,5%,1/2W,AA,TP,2.4X6.4MM	
RM514	2001-000221	R-CARBON;1.2KOHM,5%,1/8W,AA,TP,1.8X3.2M	
RM506	2001-000232	R-CARBON;1.3KOHM,5%,1/8W,AA,TP,1.8X3.2M	
RM304	2001-000241	R-CARBON;1.5KOHM,5%,1/8W,AA,TP,1.8X3.2M	
RM320	2001-000241	R-CARBON;1.5KOHM,5%,1/8W,AA,TP,1.8X3.2M	
RM321	2001-000241	R-CARBON;1.5KOHM,5%,1/8W,AA,TP,1.8X3.2M	
RM519	2001-000258	R-CARBON;1.8KOHM,5%,1/8W,AA,TP,1.8X3.2M	
RM322	2001-000258	R-CARBON;1.8KOHM,5%,1/8W,AA,TP,1.8X3.2M	
RM113	2001-000273	R-CARBON;100KOHM,5%,1/8W,AA,TP,1.8X3.2M	
RM102	2001-000273	R-CARBON;100KOHM,5%,1/8W,AA,TP,1.8X3.2M	
RM628	2001-000281	R-CARBON;100OHM,5%,1/8W,AA,TP,1.8X3.2MM	
RM637	2001-000290	R-CARBON;10KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
RM642	2001-000290	R-CARBON;10KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
RM644	2001-000290	R-CARBON;10KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
RM646	2001-000290	R-CARBON;10KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
RM647	2001-000290	R-CARBON;10KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
RM665	2001-000290	R-CARBON;10KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
RM673	2001-000290	R-CARBON;10KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
RM674	2001-000290	R-CARBON;10KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
RM681	2001-000290	R-CARBON;10KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
RM324	2001-000290	R-CARBON;10KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
RM333	2001-000290	R-CARBON;10KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
RM342	2001-000290	R-CARBON;10KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
RM345	2001-000290	R-CARBON;10KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
RM517	2001-000290	R-CARBON;10KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
RM528	2001-000290	R-CARBON;10KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
RM530	2001-000290	R-CARBON;10KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
RM534	2001-000290	R-CARBON;10KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
RM607	2001-000290	R-CARBON;10KOHM,5%,1/8W,AA,TP,1.8X3.2MM	

Loc. No.	Code No.	Description ; Specification	Remark
RM623	2001-000290	R-CARBON;10KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
RM635	2001-000290	R-CARBON;10KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
RM636	2001-000290	R-CARBON;10KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
RM535	2001-000309	R-CARBON;110OHM,5%,1/8W,AA,TP,1.8X3.2MM	
RM513	2001-000331	R-CARBON;12KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
RM508	2001-000362	R-CARBON;150OHM,5%,1/8W,AA,TP,1.8X3.2MM	
RM104	2001-000362	R-CARBON;150OHM,5%,1/8W,AA,TP,1.8X3.2MM	
RM521	2001-000405	R-CARBON;180OHM,5%,1/8W,AA,TP,1.8X3.2MM	
RM609	2001-000429	R-CARBON;1KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
RM610	2001-000429	R-CARBON;1KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
RM611	2001-000429	R-CARBON;1KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
RM612	2001-000429	R-CARBON;1KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
RM618	2001-000429	R-CARBON;1KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
RM619	2001-000429	R-CARBON;1KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
RM620	2001-000429	R-CARBON;1KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
RM621	2001-000429	R-CARBON;1KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
RM624	2001-000429	R-CARBON;1KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
RM625	2001-000429	R-CARBON;1KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
RM626	2001-000429	R-CARBON;1KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
RM627	2001-000429	R-CARBON;1KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
RM632	2001-000429	R-CARBON;1KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
RM633	2001-000429	R-CARBON;1KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
RM634	2001-000429	R-CARBON;1KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
RM638	2001-000429	R-CARBON;1KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
RM639	2001-000429	R-CARBON;1KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
RM640	2001-000429	R-CARBON;1KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
RM641	2001-000429	R-CARBON;1KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
RM643	2001-000429	R-CARBON;1KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
RM645	2001-000429	R-CARBON;1KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
RM648	2001-000429	R-CARBON;1KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
RM649	2001-000429	R-CARBON;1KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
RM653	2001-000429	R-CARBON;1KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
RM654	2001-000429	R-CARBON;1KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
RM655	2001-000429	R-CARBON;1KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
RM656	2001-000429	R-CARBON;1KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
RM657	2001-000429	R-CARBON;1KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
RM658	2001-000429	R-CARBON;1KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
RM663	2001-000429	R-CARBON;1KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
RM664	2001-000429	R-CARBON;1KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
RM668	2001-000429	R-CARBON;1KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
RM671	2001-000429	R-CARBON;1KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
RM676	2001-000429	R-CARBON;1KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
RM679	2001-000429	R-CARBON;1KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
RM680	2001-000429	R-CARBON;1KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
RM110	2001-000429	R-CARBON;1KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
RM111	2001-000429	R-CARBON;1KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
RM312	2001-000429	R-CARBON;1KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
RM340	2001-000429	R-CARBON;1KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
RM522	2001-000429	R-CARBON;1KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
RM524	2001-000429	R-CARBON;1KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
RM605	2001-000429	R-CARBON;1KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
RM606	2001-000429	R-CARBON;1KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
RM608	2001-000429	R-CARBON;1KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
RM502	2001-000449	R-CARBON;2.2KOHM,5%,1/8W,AA,TP,1.8X3.2M	
RM317	2001-000449	R-CARBON;2.2KOHM,5%,1/8W,AA,TP,1.8X3.2M	
RM505	2001-000454	R-CARBON;2.2MOHM,5%,1/8W,AA,TP,1.8X3.2M	
RM518	2001-000458	R-CARBON;2.2OHM,5%,1/8W,AA,TP,1.8X3.2MM	
RM511	2001-000472	R-CARBON;2.7KOHM,5%,1/8W,AA,TP,1.8X3.2M	
RM327	2001-000508	R-CARBON;220KOHM,5%,1/8W,AA,TP,1.8X3.2M	
RM326	2001-000508	R-CARBON;220KOHM,5%,1/8W,AA,TP,1.8X3.2M	
RM670	2001-000515	R-CARBON;220OHM,5%,1/8W,AA,TP,1.8X3.2MM	
RM669	2001-000515	R-CARBON;220OHM,5%,1/8W,AA,TP,1.8X3.2MM	
RM602	2001-000522	R-CARBON;22KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
RM604	2001-000522	R-CARBON;22KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
RM666	2001-000522	R-CARBON;22KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
RM301	2001-000522	R-CARBON;22KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
RM516	2001-000522	R-CARBON;22KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
RM523	2001-000522	R-CARBON;22KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
RM629	2001-000539	R-CARBON;24KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
RM603	2001-000554	R-CARBON;270OHM,5%,1/8W,AA,TP,1.8X3.2MM	
RM601	2001-000554	R-CARBON;270OHM,5%,1/8W,AA,TP,1.8X3.2MM	
RM305	2001-000563	R-CARBON;27KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
RM302	2001-000577	R-CARBON;2KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
RM343	2001-000595	R-CARBON;3.3MOHM,5%,1/8W,AA,TP,1.8X3.2M	
RM678	2001-000633	R-CARBON;30KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
RM331	2001-000633	R-CARBON;30KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
RM532	2001-000645	R-CARBON;330KOHM,5%,1/8W,AA,TP,1.8X3.2M	
RM329	2001-000660	R-CARBON;33KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
RM507	2001-000660	R-CARBON;33KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
RM617	2001-000660	R-CARBON;33KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
RM501	2001-000674	R-CARBON;360OHM,5%,1/8W,AA,TP,1.8X3.2MM	
RM652	2001-000734	R-CARBON;4.7KOHM,5%,1/8W,AA,TP,1.8X3.2M	
RM303	2001-000734	R-CARBON;4.7KOHM,5%,1/8W,AA,TP,1.8X3.2M	
RM650	2001-000734	R-CARBON;4.7KOHM,5%,1/8W,AA,TP,1.8X3.2M	
RM651	2001-000734	R-CARBON;4.7KOHM,5%,1/8W,AA,TP,1.8X3.2M	
RM520	2001-000780	R-CARBON;470OHM,5%,1/8W,AA,TP,1.8X3.2MM	
RM615	2001-000786	R-CARBON;47KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
RM319	2001-000786	R-CARBON;47KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
RM527	2001-000786	R-CARBON;47KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
RM529	2001-000786	R-CARBON;47KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
RM328	2001-000800	R-CARBON;5.1KOHM,5%,1/8W,AA,TP,1.8X3.2M	
RM533	2001-000812	R-CARBON;5.6KOHM,5%,1/8W,AA,TP,1.8X3.2M	
RM531	2001-000812	R-CARBON;5.6KOHM,5%,1/8W,AA,TP,1.8X3.2M	
RM659	2001-000832	R-CARBON;510OHM,5%,1/8W,AA,TP,1.8X3.2MM	
RM334	2001-000832	R-CARBON;510OHM,5%,1/8W,AA,TP,1.8X3.2MM	
RM339	2001-000837	R-CARBON;51KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
RM613	2001-000864	R-CARBON;56KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
RM614	2001-000864	R-CARBON;56KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
RM616	2001-000864	R-CARBON;56KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
RM512	2001-000878	R-CARBON;6.2KOHM,5%,1/8W,AA,TP,1.8X3.2M	
RM332	2001-000947	R-CARBON;7.5KOHM,5%,1/8W,AA,TP,1.8X3.2M	
RM314	2001-000969	R-CARBON;75OHM,5%,1/8W,AA,TP,1.8X3.2MM	
RM309	2001-000969	R-CARBON;75OHM,5%,1/8W,AA,TP,1.8X3.2MM	
RM311	2001-000977	R-CARBON;8.2KOHM,5%,1/8W,AA,TP,1.8X3.2M	
RM315	2001-000977	R-CARBON;8.2KOHM,5%,1/8W,AA,TP,1.8X3.2M	
RM323	2001-000977	R-CARBON;8.2KOHM,5%,1/8W,AA,TP,1.8X3.2M	
RM318	2001-000989	R-CARBON;820KOHM,5%,1/8W,AA,TP,1.8X3.2M	
RM701	2001-001077	R-CARBON(S);150OHM,5%,1/2W,AA,TP,2.4X6.4MM	
RM702	2001-001077	R-CARBON(S);150OHM,5%,1/2W,AA,TP,2.4X6.4MM	
RM703	2001-001077	R-CARBON(S);150OHM,5%,1/2W,AA,TP,2.4X6.4MM	
RM101	2001-001088	R-CARBON(S);1KOHM,5%,1/2W,AA,TP,2.4X6.4MM	
RM106	2001-001107	R-CARBON(S);220ohm,5%,1/2W,AA,TP,2.4x6.4mm	
RM306	2001-001108	R-CARBON(S);22KOHM,5%,1/2W,AA,TP,2.4X6.4MM	
RM308	2001-001114	R-CARBON(S);270OHM,5%,1/2W,AA,TP,2.4X6.4MM	
RM112	2001-001122	R-CARBON(S);3.9KOHM,5%,1/2W,AA,TP,2.4X6.4M	
RM675	2003-002129	R-METAL OXIDE(S);3.9ohm,5%,2W,AF,TP,3.9x10mm	
RM510	2004-001989	R-METAL;620ohm,5%,1/8W,AA,TP,1.8x3.2mm	
RM109	2008-001015	R-FUSIBLE(S);1.5ohm,5%,2W,AF,TP,3.9x10mm	
RM108	2008-001015	R-FUSIBLE(S);1.5ohm,5%,2W,AF,TP,3.9x10mm	
VRM601	2103-000669	VR-SEMI;10Kohm,25%,1/5W,TOP	
CM307	2201-000345	C-CERAMIC,DISC;200pF,5%,50V,SL,TP,6.3*3,5	
CM304	2201-000499	C-CERAMIC,DISC;390pF,5%,50V,SL,TP,8.0x3.0,5	
CM351	2201-000961	C-CERAMIC,DISC;10pF,0.5pF,50V,RH,TP,5x3mm,5mm	
CM636	2202-000121	C-CERAMIC,MLC-AXIAL;100pF,10%,50V,Y5P,TP,1.9x3.5,-	
CM655	2202-000127	C-CERAMIC,MLC-AXIAL;10nF,+80-20%,25V,Y5V,TP,-,7.5	
CM311	2202-000127	C-CERAMIC,MLC-AXIAL;10nF,+80-20%,25V,Y5V,TP,-,7.5	
CM321	2202-000127	C-CERAMIC,MLC-AXIAL;10nF,+80-20%,25V,Y5V,TP,-,7.5	
CM330	2202-000127	C-CERAMIC,MLC-AXIAL;10nF,+80-20%,25V,Y5V,TP,-,7.5	
CM337	2202-000127	C-CERAMIC,MLC-AXIAL;10nF,+80-20%,25V,Y5V,TP,-,7.5	
CM344	2202-000127	C-CERAMIC,MLC-AXIAL;10nF,+80-20%,25V,Y5V,TP,-,7.5	
CM347	2202-000127	C-CERAMIC,MLC-AXIAL;10nF,+80-20%,25V,Y5V,TP,-,7.5	
CM348	2202-000127	C-CERAMIC,MLC-AXIAL;10nF,+80-20%,25V,Y5V,TP,-,7.5	
CM349	2202-000127	C-CERAMIC,MLC-AXIAL;10nF,+80-20%,25V,Y5V,TP,-,7.5	
CM350	2202-000127	C-CERAMIC,MLC-AXIAL;10nF,+80-20%,25V,Y5V,TP,-,7.5	
CM524	2202-000127	C-CERAMIC,MLC-AXIAL;10nF,+80-20%,25V,Y5V,TP,-,7.5	
CM601	2202-000127	C-CERAMIC,MLC-AXIAL;10nF,+80-20%,25V,Y5V,TP,-,7.5	
CM612	2202-000127	C-CERAMIC,MLC-AXIAL;10nF,+80-20%,25V,Y5V,TP,-,7.5	
CM615	2202-000127	C-CERAMIC,MLC-AXIAL;10nF,+80-20%,25V,Y5V,TP,-,7.5	
CM617	2202-000127	C-CERAMIC,MLC-AXIAL;10nF,+80-20%,25V,Y5V,TP,-,7.5	
CM619	2202-000127	C-CERAMIC,MLC-AXIAL;10nF,+80-20%,25V,Y5V,TP,-,7.5	
CM623	2202-000127	C-CERAMIC,MLC-AXIAL;10nF,+80-20%,25V,Y5V,TP,-,7.5	
CM624	2202-000127	C-CERAMIC,MLC-AXIAL;10nF,+80-20%,25V,Y5V,TP,-,7.5	
CM630	2202-000127	C-CERAMIC,MLC-AXIAL;10nF,+80-20%,25V,Y5V,TP,-,7.5	
CM631	2202-000127	C-CERAMIC,MLC-AXIAL;10nF,+80-20%,25V,Y5V,TP,-,7.5	
CM633	2202-000183	C-CERAMIC,MLC-AXIAL;2.2NF,20%,16V,Y5R,TP,3.5X1.9MM	
CM632	2202-000183	C-CERAMIC,MLC-AXIAL;2.2NF,20%,16V,Y5R,TP,3.5X1.9MM	
CM610	2202-000205	C-CERAMIC,MLC-AXIAL;22pF,5%,50V,SL,TP,1.9x3.5,-	
CM607	2202-000205	C-CERAMIC,MLC-AXIAL;22pF,5%,50V,SL,TP,1.9x3.5,-	
CM608	2202-000205	C-CERAMIC,MLC-AXIAL;22pF,5%,50V,SL,TP,1.9x3.5,-	
CM609	2202-000205	C-CERAMIC,MLC-AXIAL;22pF,5%,50V,SL,TP,1.9x3.5,-	
CM634	2202-000263	C-CERAMIC,MLC-AXIAL;470pF,10%,50V,Y5P,TP,3.5x19,-	
CM319	2202-000286	C-CERAMIC,MLC-AXIAL;56pF,5%,50V,SL,TP,1.9x3.5,-	
CM640	2202-000806	C-CERAMIC,MLC-AXIAL;220pF,10%,50V,Y5P,TP,3.5x19,-	
CM512	2202-002037	C-CERAMIC,MLC-AXIAL;100nF,80-20%,50V,Y5V,TP,2.2x3.	

Loc. No.	Code No.	Description ; Specification	Remark
CM606	2202-002037	C-CERAMIC,MLC-AXIAL;100nF,80-20%,50V,Y5V,TP,2.2x3.	
CM613	2202-002037	C-CERAMIC,MLC-AXIAL;100nF,80-20%,50V,Y5V,TP,2.2x3.	
CM620	2202-002037	C-CERAMIC,MLC-AXIAL;100nF,80-20%,50V,Y5V,TP,2.2x3.	
CM621	2202-002037	C-CERAMIC,MLC-AXIAL;100nF,80-20%,50V,Y5V,TP,2.2x3.	
CM625	2202-002037	C-CERAMIC,MLC-AXIAL;100nF,80-20%,50V,Y5V,TP,2.2x3.	
CM628	2202-002037	C-CERAMIC,MLC-AXIAL;100nF,80-20%,50V,Y5V,TP,2.2x3.	
CM638	2202-002037	C-CERAMIC,MLC-AXIAL;100nF,80-20%,50V,Y5V,TP,2.2x3.	
CM701	2202-002037	C-CERAMIC,MLC-AXIAL;100nF,80-20%,50V,Y5V,TP,2.2x3.	
CM111	2202-002037	C-CERAMIC,MLC-AXIAL;100nF,80-20%,50V,Y5V,TP,2.2x3.	
CM112	2202-002037	C-CERAMIC,MLC-AXIAL;100nF,80-20%,50V,Y5V,TP,2.2x3.	
CM113	2202-002037	C-CERAMIC,MLC-AXIAL;100nF,80-20%,50V,Y5V,TP,2.2x3.	
CM115	2202-002037	C-CERAMIC,MLC-AXIAL;100nF,80-20%,50V,Y5V,TP,2.2x3.	
CM303	2202-002037	C-CERAMIC,MLC-AXIAL;100nF,80-20%,50V,Y5V,TP,2.2x3.	
CM322	2202-002037	C-CERAMIC,MLC-AXIAL;100nF,80-20%,50V,Y5V,TP,2.2x3.	
CM325	2202-002037	C-CERAMIC,MLC-AXIAL;100nF,80-20%,50V,Y5V,TP,2.2x3.	
CM326	2202-002037	C-CERAMIC,MLC-AXIAL;100nF,80-20%,50V,Y5V,TP,2.2x3.	
CM334	2202-002037	C-CERAMIC,MLC-AXIAL;100nF,80-20%,50V,Y5V,TP,2.2x3.	
CM343	2202-002037	C-CERAMIC,MLC-AXIAL;100nF,80-20%,50V,Y5V,TP,2.2x3.	
CM501	2202-002037	C-CERAMIC,MLC-AXIAL;100nF,80-20%,50V,Y5V,TP,2.2x3.	
CM505	2202-002037	C-CERAMIC,MLC-AXIAL;100nF,80-20%,50V,Y5V,TP,2.2x3.	
CM354	2202-002055	C-CERAMIC,MLC-AXIAL;47nF,+80-20%,50V,Y5V,TP,2.2x3.	
CM329	2202-002055	C-CERAMIC,MLC-AXIAL;47nF,+80-20%,50V,Y5V,TP,2.2x3.	
CM506	2301-000192	C-FILM,PEF;1nF,5%,50V,TP,5.3x10mm,5mm	
CM513	2301-000224	C-FILM,PEF;22nF,5%,50V,TP,7.4x3.9x13mm,5m	
CM312	2301-000224	C-FILM,PEF;22nF,5%,50V,TP,7.4x3.9x13mm,5m	
CM604	2301-000232	C-FILM,PEF;3.3nF,5%,50V,TP,8.1x4.5x13mm,5	
CM521	2301-000254	C-FILM,PEF;39nF,5%,50V,TP,7.5x3.5x6.5mm,5	
CM517	2301-000301	C-FILM,PEF;6.8nF,5%,50V,TP,6.5X5.5X3.0X5,	
CM515	2301-000301	C-FILM,PEF;6.8nF,5%,50V,TP,6.5X5.5X3.0X5,	
CM603	2301-000310	C-FILM,PEF;68nF,5%,50V,TP,8.0X8.5X4.0X5,5	
CM602	2301-000310	C-FILM,PEF;68nF,5%,50V,TP,8.0X8.5X4.0X5,5	
CM516	2301-000314	C-FILM,PEF;8.2nF,5%,50V,TP,6.5x3.0x5.5mm,	
CM507	2301-000342	C-FILM,PEF;2.2nF,5%,50V,TP,7.4x3.9x13mm,5	
CM336	2301-000356	C-FILM,PEF;47nF,5%,50V,TP,7.5x4.0x6.5,5mm	
CM335	2301-000356	C-FILM,PEF;47nF,5%,50V,TP,7.5x4.0x6.5,5mm	
CM519	2301-000383	C-FILM,PEF;10nF,5%,50V,TP,6x7x3.2mm,5mm	
CM320	2301-000383	C-FILM,PEF;10nF,5%,50V,TP,6x7x3.2mm,5mm	
CM510	2301-000383	C-FILM,PEF;10nF,5%,50V,TP,6x7x3.2mm,5mm	
CM518	2301-000383	C-FILM,PEF;10nF,5%,50V,TP,6x7x3.2mm,5mm	
CM523	2305-000665	C-FILM,MPEF;100nF,5%,63V,TP,7.5x4.0x5.0mm,	
CM622	2401-000302	C-AL;100uF,20%,25V,GP,TP,6.3x11,5	
CM108	2401-000302	C-AL;100uF,20%,25V,GP,TP,6.3x11,5	
CM109	2401-000302	C-AL;100uF,20%,25V,GP,TP,6.3x11,5	
CM616	2401-000302	C-AL;100uF,20%,25V,GP,TP,6.3x11,5	
CM618	2401-000302	C-AL;100uF,20%,25V,GP,TP,6.3x11,5	
CM509	2401-000455	C-AL;10uF,20%,35V,GP,TP,4x7mm,5mm	
CM103	2401-000480	C-AL;10uF,20%,50V,GP,TP,5x11,5	
CM346	2401-000598	C-AL;1uF,20%,50V,GP,TP,4x7,5	
CM305	2401-000598	C-AL;1uF,20%,50V,GP,TP,4x7,5	
CM318	2401-000598	C-AL;1uF,20%,50V,GP,TP,4x7,5	
CM327	2401-000598	C-AL;1uF,20%,50V,GP,TP,4x7,5	
CM328	2401-000598	C-AL;1uF,20%,50V,GP,TP,4x7,5	
CM106	2401-000598	C-AL;1uF,20%,50V,GP,TP,4x7,5	
CM107	2401-000598	C-AL;1uF,20%,50V,GP,TP,4x7,5	
CM331	2401-000603	C-AL;1uF,20%,50V,GP,TP,5x11,5	
CM332	2401-000603	C-AL;1uF,20%,50V,GP,TP,5x11,5	
CM338	2401-000603	C-AL;1uF,20%,50V,GP,TP,5x11,5	
CM313	2401-000603	C-AL;1uF,20%,50V,GP,TP,5x11,5	
CM316	2401-000603	C-AL;1uF,20%,50V,GP,TP,5x11,5	
CM317	2401-000603	C-AL;1uF,20%,50V,GP,TP,5x11,5	
CM503	2401-000914	C-AL;22uF,20%,16V,GP,TP,5x11,5	
CM310	2401-000922	C-AL;22uF,20%,16V,GP,TP,5x5,5	
CM611	2401-001250	C-AL;4.7uF,20%,35V,GP,TP,4x5,5	
CM309	2401-001363	C-AL;470uF,20%,16V,GP,TP,10x12.5,5	
CM302	2401-001496	C-AL;47uF,20%,16V,GP,TP,5x7,5	
CM504	2401-001537	C-AL;47uF,20%,25V,GP,TP,6.3x7mm,5mm	
CM342	2401-001537	C-AL;47uF,20%,25V,GP,TP,6.3x7mm,5mm	
CM301	2401-001914	C-AL;1uF,20%,50V,BP,TP,5x11,5	
CM702	2401-002009	C-AL;100uF,20%,16V,GP,TP,6.3x7,5	
CM637	2401-002009	C-AL;100uF,20%,16V,GP,TP,6.3x7,5	
CM314	2401-002235	C-AL;10uF,20%,16V,GP,TP,5x11mm,5mm	
CM315	2401-002235	C-AL;10uF,20%,16V,GP,TP,5x11mm,5mm	
CM333	2401-002235	C-AL;10uF,20%,16V,GP,TP,5x11mm,5mm	
CM639	2401-002291	C-AL;47uF,20%,16V,GP,TP,6.3x5,5	
CM323	2401-002291	C-AL;47uF,20%,16V,GP,TP,6.3x5,5	
CM324	2401-002291	C-AL;47uF,20%,16V,GP,TP,6.3x5,5	
CM605	2401-002291	C-AL;47uF,20%,16V,GP,TP,6.3x5,5	
CM508	2401-002299	C-AL;4.7uF,20%,50V,GP,TP,5x7,5	
CM514	2401-002299	C-AL;4.7uF,20%,50V,GP,TP,5x7,5	
CM635	2401-002299	C-AL;4.7uF,20%,50V,GP,TP,5x7,5	
CM502	2401-002462	C-AL;33uF,20%,16V,GP,TP,5x11,5	
CM614	2401-002619	C-AL;47uF,20%,25V,GP,TP,5x11,5	
CM654	2401-002619	C-AL;47uF,20%,25V,GP,TP,5x11,5	
CM102	2401-002619	C-AL;47uF,20%,25V,GP,TP,5x11,5	
CM105	2401-002619	C-AL;47uF,20%,25V,GP,TP,5x11,5	
CM110	2401-002619	C-AL;47uF,20%,25V,GP,TP,5x11,5	
CM114	2401-002619	C-AL;47uF,20%,25V,GP,TP,5x11,5	
CM520	2401-002619	C-AL;47uF,20%,25V,GP,TP,5x11,5	
LM604	2701-000002	INDUCTOR-AXIAL;100uH,10%,4.2x9.8mm	
LM301	2701-000002	INDUCTOR-AXIAL;100uH,10%,4.2x9.8mm	
LM302	2701-000002	INDUCTOR-AXIAL;100uH,10%,4.2x9.8mm	
LM303	2701-000002	INDUCTOR-AXIAL;100uH,10%,4.2x9.8mm	
LM304	2701-000002	INDUCTOR-AXIAL;100uH,10%,4.2x9.8mm	
LM501	2701-000002	INDUCTOR-AXIAL;100uH,10%,4.2x9.8mm	
LM502	2701-000002	INDUCTOR-AXIAL;100uH,10%,4.2x9.8mm	
LM601	2701-000002	INDUCTOR-AXIAL;100uH,10%,4.2x9.8mm	
LM602	2701-000002	INDUCTOR-AXIAL;100uH,10%,4.2x9.8mm	
LM603	2701-000002	INDUCTOR-AXIAL;100uH,10%,4.2x9.8mm	
LM504	2701-000180	INDUCTOR-AXIAL;33uH,5%,2.5x3.4mm	
LM503	2702-000120	INDUCTOR-RADIAL;15mH,5%,6.2x7.4mm	
XTM602	2801-003224	CRYSTAL-UNIT;32.768KHz,20ppm,28-AAY,12.5pF,	
XTM301	2801-003610	CRYSTAL-UNIT;3.579545MHz,8ppm,28-AAA,S,100o	
XTM601	2801-003750	CRYSTAL-UNIT;8MHZ,30PPM,28-AAA,22PF,80OHM,T	
BDM603	3301-000287	CORE-FERRITE BEAD;AA,3.5x1.0x6.0mm,1500,2400G	
BDM602	3301-000287	CORE-FERRITE BEAD;AA,3.5x1.0x6.0mm,1500,2400G	
SWM701	3404-000244	SWITCH-TACT;15V,20mA,90-170gf,7.5x7mm,SPST	
SWM702	3404-000244	SWITCH-TACT;15V,20mA,90-170gf,7.5x7mm,SPST	
SWM703	3404-000244	SWITCH-TACT;15V,20mA,90-170gf,7.5x7mm,SPST	
SWM704	3404-000244	SWITCH-TACT;15V,20mA,90-170gf,7.5x7mm,SPST	
SWM705	3404-000244	SWITCH-TACT;15V,20mA,90-170gf,7.5x7mm,SPST	
SWM706	3404-000244	SWITCH-TACT;15V,20mA,90-170gf,7.5x7mm,SPST	
SWM707	3404-000244	SWITCH-TACT;15V,20mA,90-170gf,7.5x7mm,SPST	
SWM708	3404-000244	SWITCH-TACT;15V,20mA,90-170gf,7.5x7mm,SPST	
SWM709	3404-000244	SWITCH-TACT;15V,20mA,90-170gf,7.5x7mm,SPST	
CNM301	3708-000395	CONNECTOR-FPC/FC/PIC;8P,1.25mm,STRAIGHT,SN	
CNM501	3708-001053	CONNECTOR-FPC/FC/PIC;7P,1.25mm,STRAIGHT,SN	
CNM604	3708-001131	CONNECTOR-FPC/FC/PIC;5P,1.25mm,STRAIGHT,SN	
CNM502	3710-000405	CONNECTOR-SOCKET;2P,2R,2.5mm,-,	
CNM602	3711-003749	CONNECTOR-HEADER;BOX,8P,2R,2mm,STRAIGHT,SN	
CNM51A	3809-001111	CABLE-FLAT;30V,80C,130mm,7P,1.25mm,UL2896	
CNM61A	3809-001112	CABLE-FLAT;30V,80C,130mm,5P,1.25mm,UL2896	

ASSY-CRT

⚠	AA03-10001D	CRT-COLOR;-,A34KQV42X,+380MG,14,90DEG,5	
	AA27-00001A	MAGNET-CONVERGENCE;-,JH225-06A,22.5MM	
⚠	AA27-50004X	DEFLECTION-YOKE;-,DSE-1422FL(G),14'/A34KQV42X,	
	AA63-60028A	SPACER-DY;NEOPRENE,-,BLK,V0 W12,-,-	

ASSY-PCB,A/V

*	AA95-40005S	ASSY-PCB,A/V;-,TVN3350/KH1X,KH25,-,-,-	
CV602	AA39-20027A	LEAD-CONNECTOR,ASSY;-,67096-006,S,6P,300,1007#26	
A/VPWB	AA41-10290F	PCB-A/V;KH1,1L,FR-1,227x50.5x1.6T,-,-	
R605	2001-001187	R-CARBON(S);75OHM,5%,1/2W,AA,TP,2.4X6.4MM	
R606	2001-001187	R-CARBON(S);75OHM,5%,1/2W,AA,TP,2.4X6.4MM	
CV602	3711-002645	CONNECTOR-HEADER;BOX,6P,1R,2.5mm,STRAIGHT,SN	
JE01	3722-000145	JACK-PHONE;1P,3.6mm,MBAG,BLK,-	
JA01	3722-000171	JACK-RCA;1P,3.4mm,AUF,WHT,-	
JA02	3722-000180	JACK-RCA;1P,3.4mm,SN,YEL,-	

ASSY-SPEAKER

*	AA96-10014A	ASSY-SPEAKER;-,8ohm,2W,77BR02N,-,L200	
	AA39-20500A	LEAD CONNECTOR-ASSY;-,67096-003,REC,3(2),200,1007#	
	3001-000281	SPEAKER;2.5W,8ohm,90dB,140Hz	

Loc. No.	Code No.	Description ; Specification	Remark

Loc. No.	Code No.	Description ; Specification	Remark

ASSY-POWER,CORD

*	AA96-20129A	ASSY-POWER,CORD;-,EP2/YES,H/C300,ME301P,AA61-2	
⚠	AA39-10007Y	POWER-CORD;-,EP2/YES,SPT-2 18AWGX2C,2.4M,	
	AA61-20284A	HOLDER;-,P-CORD,PP,VO,BLK,KE-002	

ASSY ACCESSORY

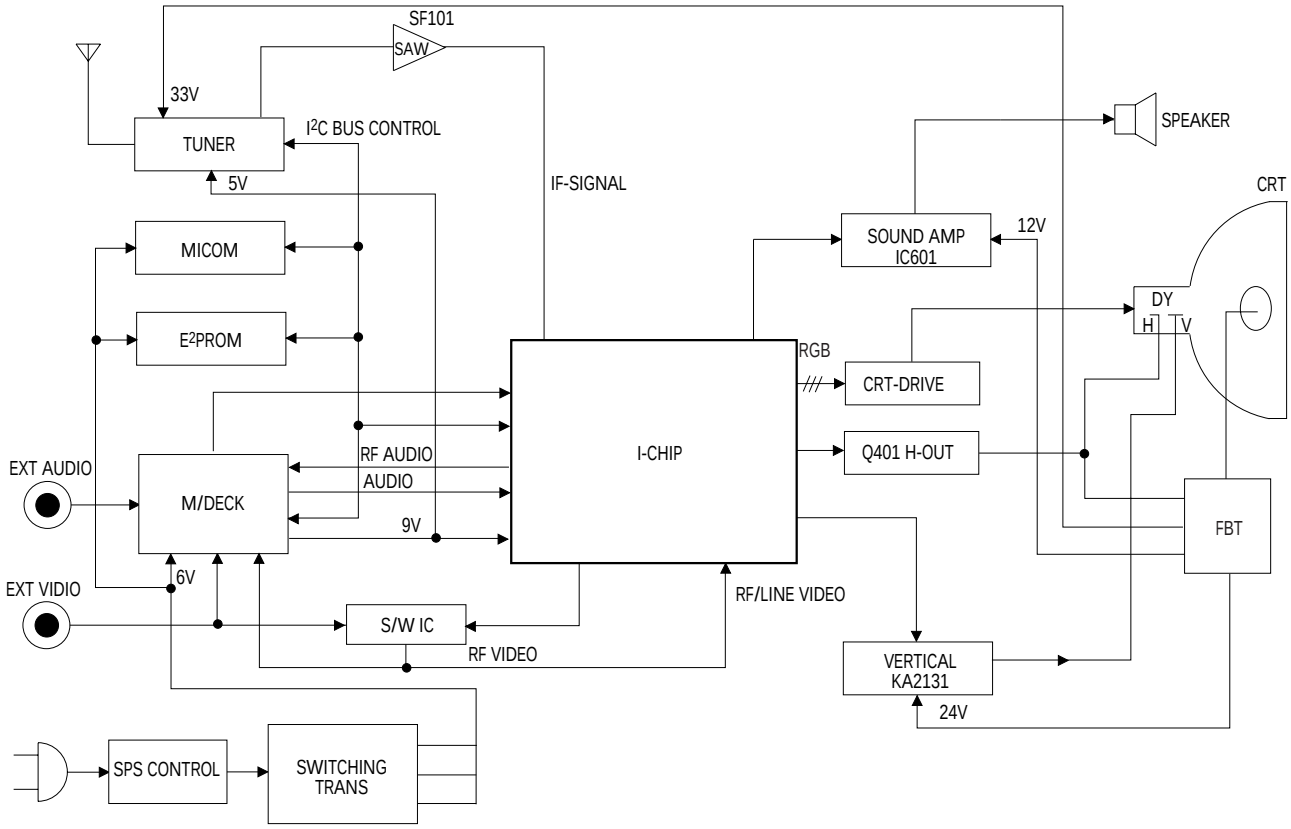
	AA68-00951A	MANUAL USERS;CMC13003,SEA,ENG,-,W/P 100(G)	

REMOCON

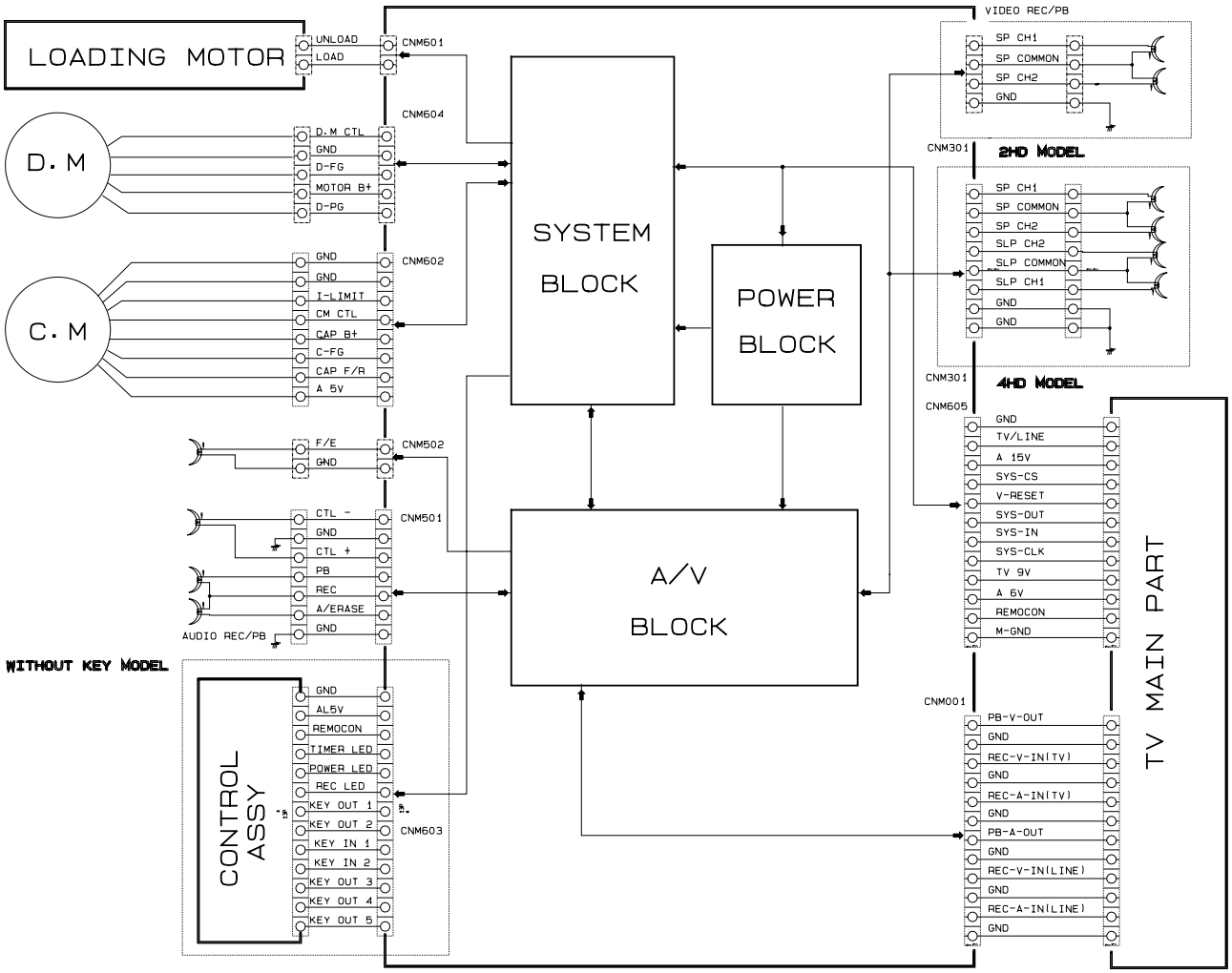
*	AA59-00134A	REMOCON;-,TM52,SZM644E,35,L/GRAY,E/X,T	

MEMO

9. Block Diagram



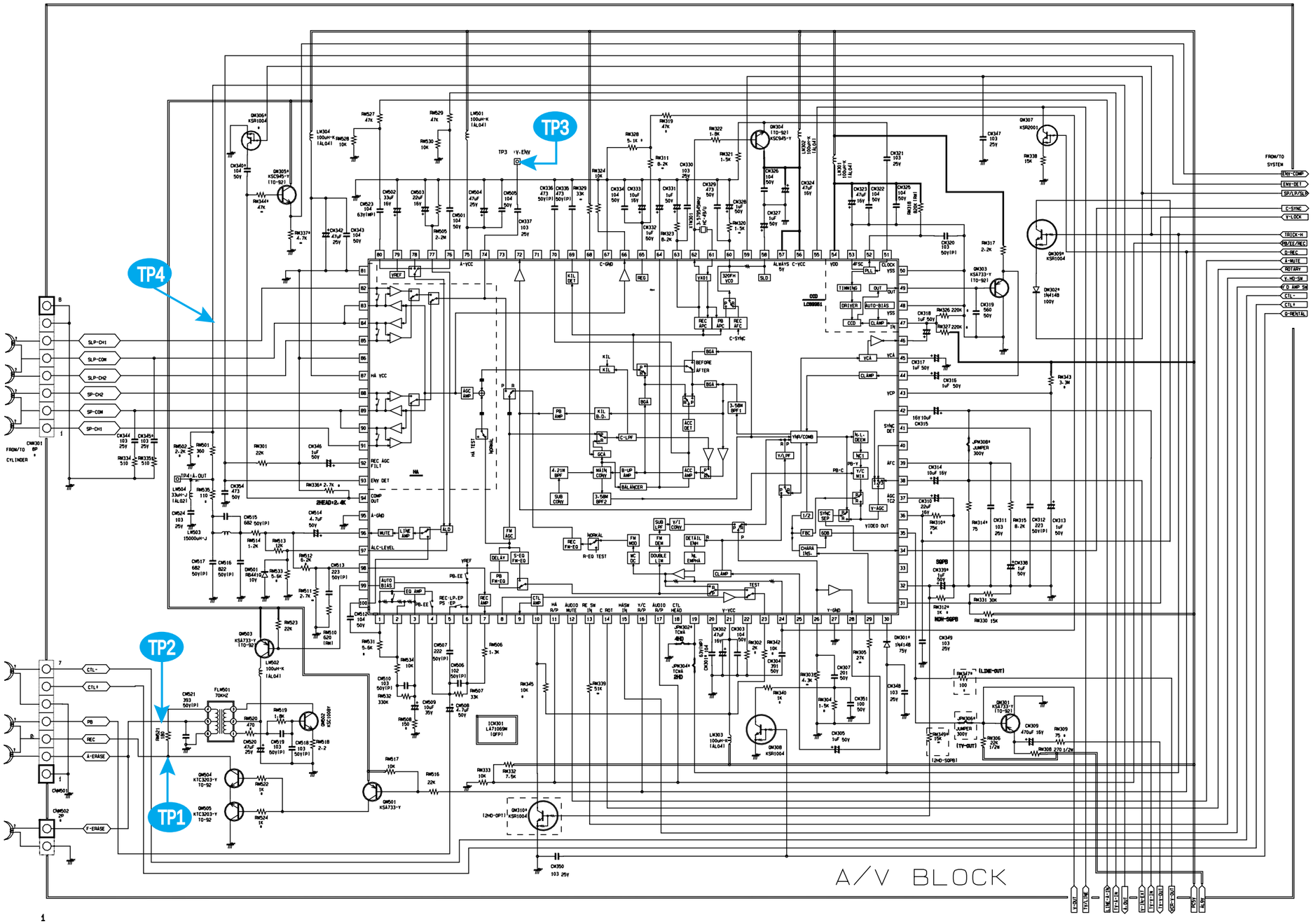
10. Wiring Diagram



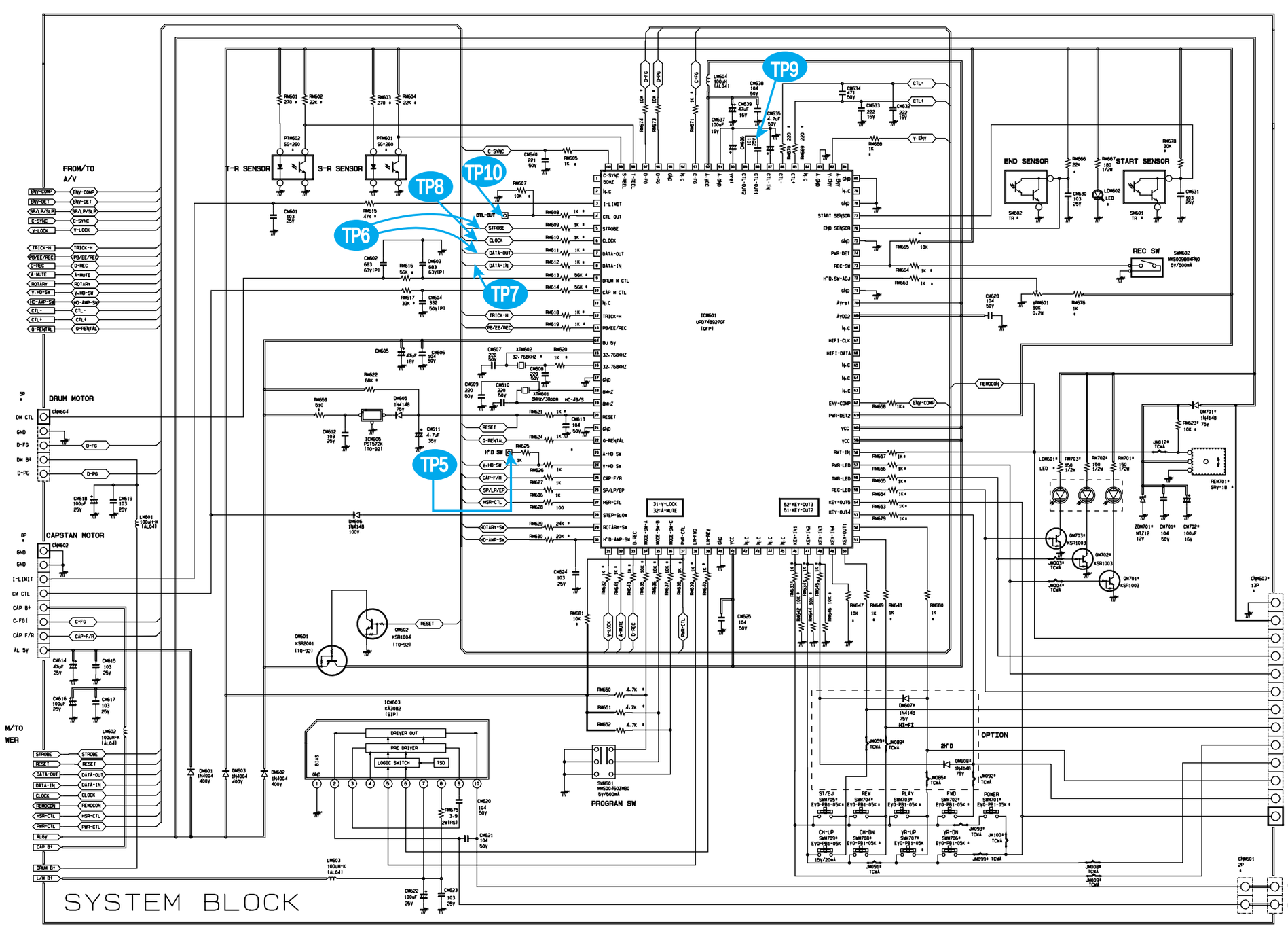
V15A M/DECK BLOCK DIAGRAM

12. Schematic Diagrams

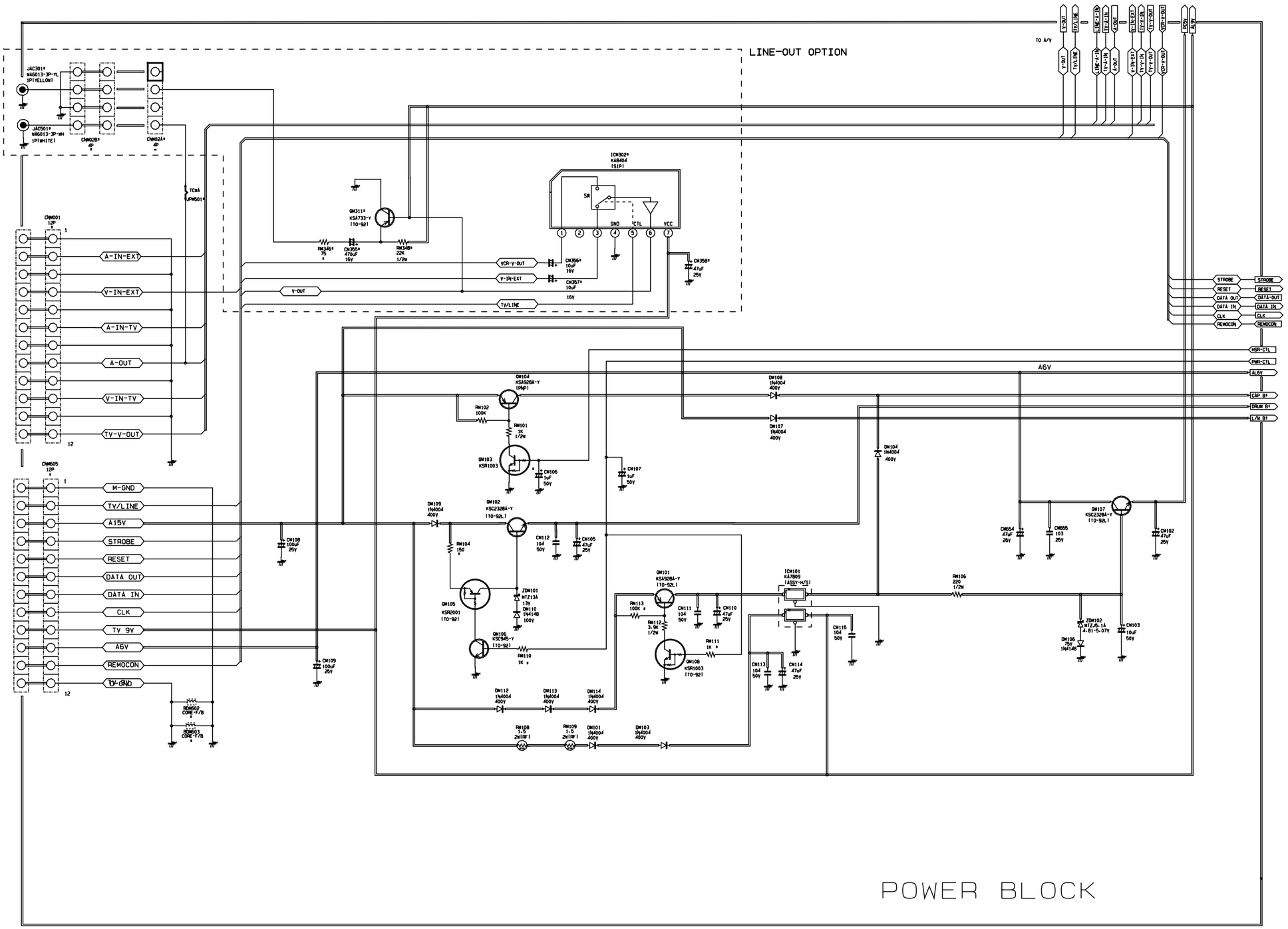
12-1 VCR (AV BLOCK)



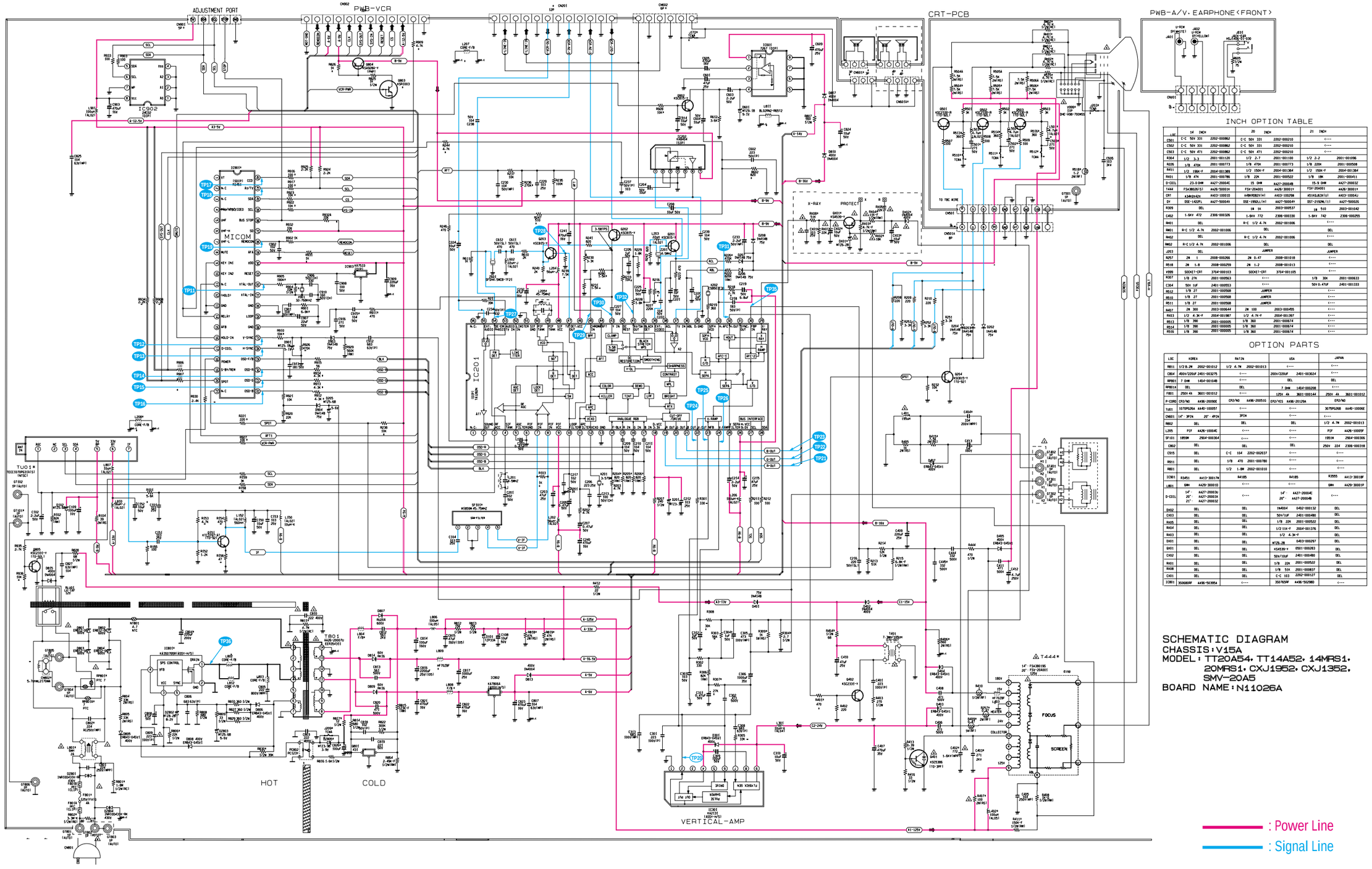
12-2 VCR (SYSTEM BLOCK)



12-3 VCR (POWER BLOCK)



12-4 TV (MAIN BLOCK)



INCH OPTION TABLE

LOC	14 INCH	20 INCH	21 INCH
C501	C-C 50V 331 2202-000862	C-C 50V 331 2202-000210	<---
C502	C-C 50V 331 2202-000862	C-C 50V 331 2202-000210	<---
C503	C-C 50V 471 2202-000862	C-C 50V 471 2202-000210	<---
R304	1/2 3.3 2001-001120	1/2 2.7 2001-001100	1/2 2.2 2001-001096
R226	1/8 470K 2001-000773	1/8 470K 2001-000773	1/8 220K 2001-000508
R401	1/2 150K-F 2004-001364	1/2 150K-F 2004-001364	1/2 150K-F 2004-001364
R451	1/8 47K 2001-000786	1/8 22K 2001-000522	1/8 18K 2001-000411
D-COIL	23.0 OHM AA27-20004C	15 OHM AA27-20004B	15.9 OHM AA27-20003Z
T444	FSA3B0915! AA26-50001K	FSY-2048S01 AA26-30001Y	FSY-2049S01 AA26-30001Y
CR1	A3MH2642! AA03-100010	A4MHR82H(1W) AA03-100298	A5140J83(1W) AA03-10004J
DY	DSE-1420FL AA27-50004X	DSE-1950LL(1W) AA27-50004Y	DST-2150ML(1W) AA27-50002G
R309	DEL	1B 1K 2003-000537	1B 510 2003-001042
C452	1-5KV 472 2306-000326	1-5KV 472 2306-000326	1-5KV 742 2306-000255
RH01	DEL	R-C 1/2 4.7K 2002-001006	<---
RM01	R-C 1/2 4.7K 2002-001006	DEL	DEL
RH02	DEL	R-C 1/2 4.7K 2002-001006	<---
RM02	R-C 1/2 4.7K 2002-001006	DEL	DEL
J203	DEL	JUMPER	JUMPER
R257	2W 1 2008-000266	2W 0.47 2008-001018	<---
R518	2W 1.8 2008-000259	2W 1.2 2008-001013	<---
V999	SOCKET-CRT 3704-000103	SOCKET-CRT 3704-001105	<---
R307	1/8 27K 2001-000563	<---	1/8 30K 2001-000633
C364	50V 1UF 2401-000553	<---	50V 0.47UF 2401-001333
R512	1/8 27 2001-000568	JUMPER	<---
R510	1/8 27 2001-000568	JUMPER	<---
R511	1/8 27 2001-000568	JUMPER	<---
R457	2W 300 2003-000644	2W 100 2003-000455	<---
RH03	1/2 4.3K-F 2004-001987	1/2 4.7K-F 2004-001397	<---
R513	1/8 390 2001-000005	1/8 360 2001-000674	<---
R511	1/8 390 2001-000005	1/8 360 2001-000674	<---
R516	1/8 390 2001-000005	1/8 360 2001-000674	<---

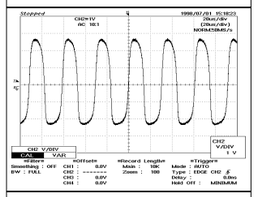
OPTION PARTS

LOC	KOREA	RATIN	USA	JAPAN
RB11	1/2 8.2M 2002-001012	1/2 4.7M 2002-001013	<---	<---
CB04	400V/220UF 2401-003275	<---	200V/220UF 2401-003624	<---
RM801	7 OHM 1404-001048	<---	DEL	DEL
RM814	DEL	DEL	7 OHM 1404-000208	<---
FB01	250V 4A 3601-001012	<---	125V 4A 3601-001144	250V 4A 3601-001012
P-CORD	CP2/NO AA96-20090E	CP2/NO AA96-20051D	CP2/YES AA96-20129A	CP2/NO
TU01	1070P6264 AA40-10005T	<---	<---	3075P6268 AA40-10006E
CN801	14" 3P1N 20" 4P1N	3P1N	<---	<---
RB02	DEL	DEL	DEL	1/2 4.7M 2002-001013
L205	PIF AA26-10004C	<---	<---	PIF AA26-10005F
SF101	1959M 2904-000364	<---	<---	1951M 2904-000306
CB02	DEL	DEL	DEL	250V 224 2306-000318
C915	DEL	C-C 104 2202-002037	<---	<---
RH11	DEL	1/8 470 2001-000780	<---	<---
RH01	DEL	1/2 1.8M 2002-001010	<---	<---
IC901	R3451 AA13-30017M	R4185	R3555 AA13-30019F	
LB01	6MH AA29-30001D	<---	6MH AA29-30001P	
D-COIL	14" AA27-20003U 20" AA27-20003X 21" AA27-20003Z	<---	14" AA27-20004C 20" AA27-20004B	<---
DH02	DEL	DEL	1N4004 0402-000132	DEL
C403	DEL	DEL	50V/1UF 2401-000480	DEL
RH05	DEL	DEL	1/8 22K 2001-000522	DEL
RH04	DEL	DEL	1/2 316-F 2004-001376	DEL
RH03	DEL	DEL	1/2 4.3K-F	DEL
DH01	DEL	DEL	MTZ5.2B 0403-000297	DEL
DH03	DEL	DEL	KS4539-Y 0501-000283	DEL
CH02	DEL	DEL	50V/10UF 2401-000480	DEL
RH01	DEL	DEL	1/8 22K 2001-000522	DEL
RH08	DEL	DEL	1/8 51K 2001-000837	DEL
C401	DEL	DEL	C-C 103 2202-000127	DEL
IC801	B5068UHF AA96-50395A	<---	3507B5HF AA96-50298D	<---

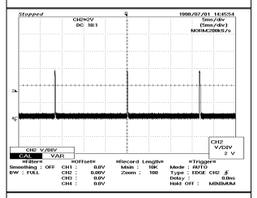
SCHEMATIC DIAGRAM
CHASSIS:V15A
MODEL:TT20A54, TT14A52, 14MRS1, 20MRS1, CXJ1952, CXJ1352, SMV-20A5
BOARD NAME:N11026A

12-4-1 Waveforms

TP11



TP12



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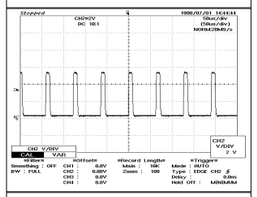

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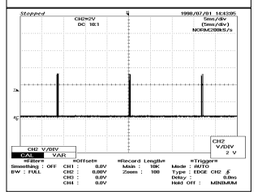

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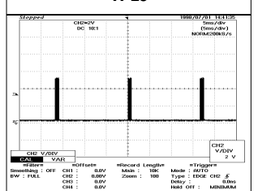

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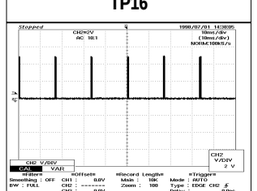

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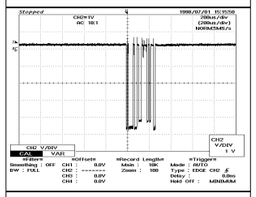

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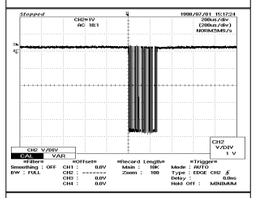

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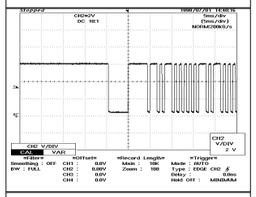

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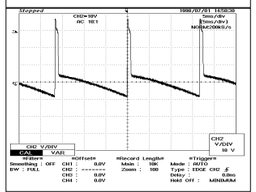

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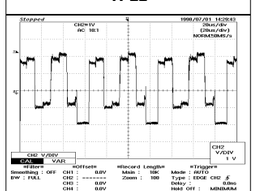

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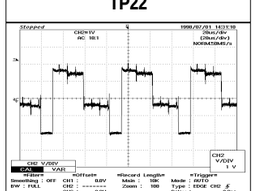

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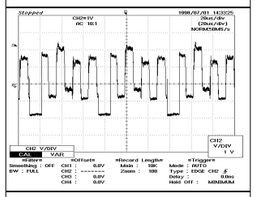

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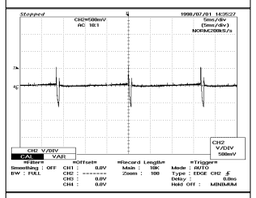

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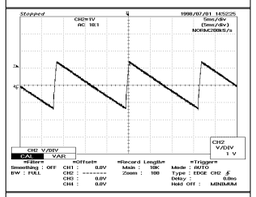

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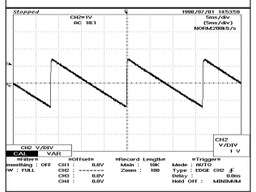

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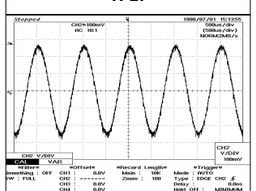
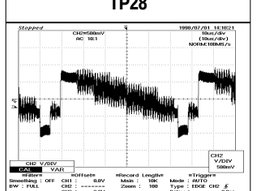


TP28



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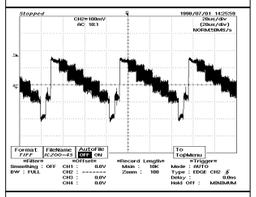

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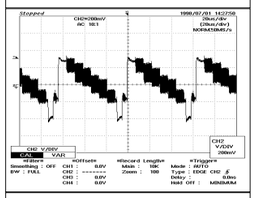

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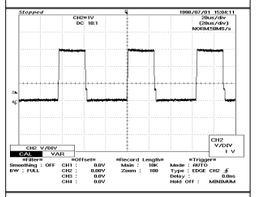

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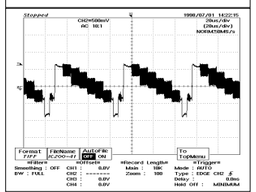
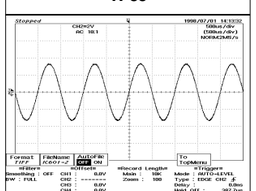


TP33



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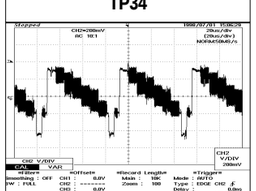
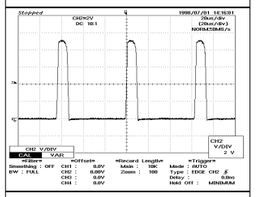
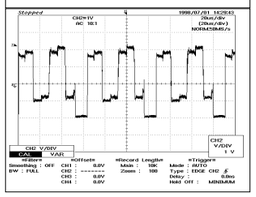


TP35



TP36